This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

**Usage guidelines**

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

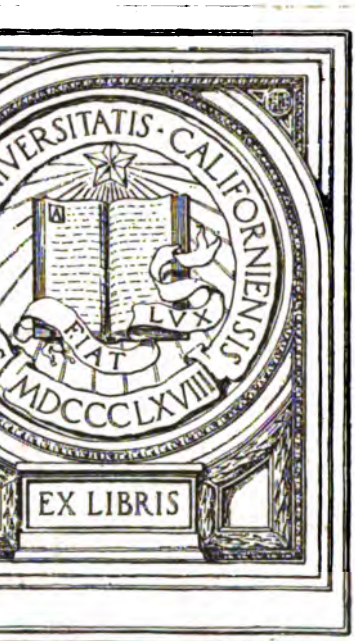
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

**About Google Book Search**

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`




952.2
1903
v.25

152 R.
1903
v.25

*Two thousand and sixty-two copies of this edition—of which two thousand are for sale in England and America—have been printed at the Ballantyne Press, Edinburgh, and the type has been distributed.*

UNIV. OF
CALIFORNIA

*LIBRARY EDITION*

# THE WORKS OF JOHN RUSKIN

EDITED BY

E. T. COOK

AND

ALEXANDER WEDDERBURN

LONDON
GEORGE ALLEN, 156, CHARING CROSS ROAD
NEW YORK: LONGMANS, GREEN, AND CO.
1906

*All rights reserved*

UNIV. OF
CALIFORNIA

LIBRARY EDITION

VOLUME XXV

# LOVE'S MEINIE

AND

# PROSERPINA

334134

# LOVE'S MEINIE

AND

# PROSERPINA

BY

JOHN RUSKIN

LONDON
GEORGE ALLEN, 156, CHARING CROSS ROAD
NEW YORK: LONGMANS, GREEN, AND CO.
1906

# CONTENTS OF VOLUME XXV


PAGE

List of Illustrations . . . . . xiii

Introduction to this Volume . . . . . xix

I. Love's Meinie (1873–1881):—

Bibliographical Note . . . . . 5

Contents . . . . . 9

Text . . . . . 11

(Added in this Edition)

Lecture on the Chough . . . . . 152

Notes for "Love's Meinie" . . . . . 175

Index . . . . . 185

II. Proserpina (1875–1886):—

Bibliographical Note . . . . . 191

Contents . . . . . 195

Text . . . . . 197

Notes for "Proserpina" (*Added in this Edition*) . . . 539

Indices . . . . . 553

The Volume also contains the following Minor Ruskiniana:—

Letters to his Father:—

Convolvulus and Nasturtium (Mornex, September 16, 1862) . xxxiv

The Beauty of the Periwinkle (Talloires, April 18, 1863) . xxxiv

An Eton Lecture on Birds: Letter to Mr. Oscar Browning (Oxford, May 19, 1873) . . . . . 5

MINOR RUSKINIANA: *Continued*:—

EXTRACTS FROM RUSKIN'S DIARY:—

PAGE

THE GROTTA DEL CANE (NAPLES, FEBRUARY 18, 1841) . . . 234

THE MOSAICS OF THE DELUGE, ST. MARK'S (VENICE, 1846) . . . 154

OAKS AND CELANDINE IN ARUNDEL PARK (MAY 15, 1875) . . . 255

THE ANAGALLIS TENELLA (BRANTWOOD, AUGUST 14, 1876) . . . xlii

TORRENT ROCKFOIL (DOMO D'OSSOLA, MAY 29, 1877) . . . . xxxv

"FRANCESCA" DISPERSA AND TERRESTRIS (ISELLA, JUNE 5, 6) . . xxxv

FURRED ANEMONE (JUNE 8) . . . . . xxxvi

ROSE-STAR (BRIEG, JUNE 11) . . . . . xxxvii

HIS NEW TURNERS (JUNE 17) . . . . . xx

SIGNS OF OVERWORK (JULY 16, 20, 23, AUGUST 5, 6) . . xix, xxii

A BOTTICELLI SKY (AUGUST 4) . . . . . xxi

MORNING AT BRANTWOOD (AUGUST 11) . . . . . xxi

MATTHEW ARNOLD (SEPTEMBER 13) . . . . . xxi

AUBREY DE VERE (SEPTEMBER 16) . . . . . xxi

MRS. ARTHUR SEVERN'S ILLNESS (OCTOBER 10) . . . . . xxi

"DELICIOUS EVENING WITH JOANIE" (DECEMBER 19) . . . . xix

JOSTLING THOUGHTS (OXFORD, DECEMBER 31, 1877) . . . . xxii

THOUGHTS OF IMMORTALITY (OXFORD, JANUARY 1, 1878) . . . xxii

A VISIT TO PRINCE LEOPOLD (WINDSOR, JANUARY 2) . . . . xxiii

OVER-PRESSURE (OXFORD, JANUARY 9, 10) . . . . . xxiii

THE RACE AGAINST TIME (BRANTWOOD, JANUARY 31) . . . . xxiv

HIS FIFTY-NINTH BIRTHDAY (FEBRUARY 8) . . . . . xxiv

WEARINESS (FEBRUARY 9, 11) . . . . . xxv

DREAMLAND (FEBRUARY 12, 15) . . . . . xxv

CLOSING THOUGHTS (FEBRUARY 22) . . . . . xxv

AFTER "THE LONG DREAM" (JUNE 18) . . . . . xxvi

GERANIUM REGIUM (SEASCALES, JUNE 15, 1881) . . . . . xlii

THE POET BLOOMFIELD (BRANTWOOD, JANUARY 13, 1879) . . . 131

SUMMER FLOWERS (BRANTWOOD, MAY 24, 1884) . . . . . xliii

LETTERS TO MRS. ARTHUR SEVERN:—

ALPINE FLOWERS (SIMPLON, JUNE 8, 1877) . . . . . xxxvi

HIS NEW TURNERS (SIMPLON, JUNE 10, 1877) . . . . . xix

LETTER TO A YOUNG READER OF "PROSERPINA" (DOMO D'OSSOLA, MAY 30, 1877) . . . . . xxxiv n.

MINOR RUSKINIANA: *Continued*:—

PAGE

LETTERS TO MR. GEORGE ALLEN:—

OVERWORK (SEPTEMBER 20, 1877) . . . . . xxii

ON ILLUSTRATIONS FOR "PROSERPINA" . . . . . l, lv

LETTER TO SIR ROBERT COLLINS ON A VISIT TO MR. GLADSTONE (JAN. 16, 1878) . . . . . xxiii

LETTER TO MISS ANDERSON: MESSAGES FROM FAR AWAY (FEB. 17, 1878) xxv

LETTERS ON HIS RECOVERY FROM ILLNESS:—

TO PRINCE LEOPOLD (BRANTWOOD, APRIL 29, 1878) . . . xxvi

TO ACLAND (BRANTWOOD, MAY 1) . . . . . xxvii

TO F. S. ELLIS (BRANTWOOD, MAY 7) . . . . . xxxix

TO "PETER" (BRANTWOOD, MAY 14) . . . . . xxxix

LETTERS TO DEAN LIDDELL ON "PROSERPINA" (NOVEMBER 18, DECEMBER 1, AND LATER) . . . . . xl, xli

REMINISCENCES OF RUSKIN:—

IN THE GARDEN AT BRANTWOOD: BY W. G. COLLINGWOOD . . xxxviii

AT AN OXFORD LECTURE: BY DEAN KITCHIN . . . . . xxvi

# LIST OF ILLUSTRATIONS

*(From Drawings by the Author*[1]*)*


THE WOODLAND GARDEN AT BRANTWOOD (*Reproduction in colours from the oil-picture by Arthur Severn, R.I.*) . *Frontispiece*

## PLATES

PLATE

I. STUDY OF BRANTWOOD THISTLE (*Photogravure*) *To face page* xxxiv

II. STUDY OF MOSS, FERN, AND WOOD-SORREL (*Photogravure*) . . . . . „ „ xxxviii

III. STUDIES OF SAXIFRAGE (*Steel Engraving by G. Allen*) „ „ xl

### IN "LOVE'S MEINIE"

IV. PELECANUS CRISPUS (*Photogravure*) . . . . . „ „ 3

V. PEACOCK'S FEATHER AND FILAMENTS (*Photogravure*) „ „ 39

VI. YOUNG AVOCET: REAL SIZE (*Steel Engraving by Hugh Allen*) . . . . . „ „ 74

VII. "'DEVELOPMENT': CROCODILE LATENT IN TOUCAN" (*Steel Engraving by G. Allen*) . . . . . „ „ 140

VIII. "'DEVELOPMENT': SHORT NOSES INTO LONG" (*Steel Engraving by G. Allen*) . . . . . „ „ 156

### IN "PROSERPINA"

IX. "BLOSSOMING—AND STRICKEN IN DAYS": COMMON HEATH OR LING (*Steel Engraving by G. Allen*) „ „ 189

X. LINE-STUDY I.: ERICA TETRALIX (*Woodcut by A. Burgess*) . . . . . „ „ 205


[1] Except the Frontispiece and Plates XVIII., XIX., and XX.

PLATE

XI. Central Type of Leaves: Common Bay-Laurel (*Steel Engraving by G. Allen*) *To face page* 229

XII. Acanthoid Leaves (*Steel Engraving by G. Allen*) „ „ 289

XIII. Crested Leaves: Lettuce-Thistle (*Steel Engraving by G. Allen*) . . . . . „ „ 290

XIV. Geranium Lucidum and Herb Robert (*Steel Engraving by H. Allen*) . . . . . „ „ 294

XV. Knap Weed (*Steel Engraving by G. Allen*) . „ „ 296

XVI. Occult Spiral Action: Waste-Thistle (*Steel Engraving by G. Allen*) . . . . . „ „ 309

XVII. Studies of Daisy (*Steel Engraving by G. Allen*) „ „ 314

XVIII. Line-Study II.: (A) Silene Juncea (*Woodcut by A. Burgess from "Flora Græca"*) . . „ „ 316

Line-Study II.: (B) Insula Dysenterica (*Woodcut by A. Burgess from "Flora Danica"*) . . . . . *Between pages* 316, 317

XIX. Line-Study III.: Leontodon Autumnale (*Woodcut by A. Burgess from "Flora Danica"*) „ „ „

XX. Line-Study IV.: Lapsania Communis (*Woodcut by A. Burgess from "Flora Danica"*) . „ „ „

XXI. Line-Study V.: "Behold a Sower went forth to Sow" (*Woodcut by A. Burgess*) *To face page* 318

XXII. Radical Insertion of Leaves of Ensatæ: Iris Germanica (*Steel Engraving by G. Allen*) . . . . . „ „ 328

XXIII. Contorta Purpurea: Purple Wreath-wort (*Steel Engraving by G. Allen*) . . . „ „ 341

XXIV. Myrtilla Regina: Sketched for her Gesture only. Isella, 1877 (*Steel Engraving by G. Allen*) . . . . . „ „ 363

PLATE

XXV. Viola Canina: Fast Sketch, to show Grouping of Leaves (*Steel Engraving by G. Allen*) *To face page* 387

XXVI. Viola Canina: Structural Details (*Steel Engraving by G. Allen*) . . . . . „ „ 403

XXVII. States of Adversity (*Steel Engraving by G. Allen*) . . . . . „ „ 464

XXVIII. Menthæ: Profile and Front Views of Blossoms—Salvia Alba, Dead Nettle, and Thyme—enlarged (*Steel Engraving by G. Allen*) . . . . . „ „ 480

XXIX. Veronica Officinalis: Leafage in Foreground Effect (*Steel Engraving by G. Allen*) . . „ „ 498

XXX. Cotoneaster Spray: seen in Front (*Steel Engraving by G. Allen*) . . . . . „ „ 535

XXXI. Cotoneaster Spray: seen from the Side (*Steel Engraving by G. Allen*) . . . . . „ „ 536

## WOODCUTS IN THE TEXT

### IN "LOVE'S MEINIE"

(*Cut by A. Burgess, from drawings by the Author*)

FIG. PAGE

1, 2. Feather of a Robin's Wing . . . . . 37, 38

3. A Genevese Boat and a Bird in Flight . . . . 61

4. Sail and Wing . . . . . 63

5. Diagram Illustrating a Bird's Flight . . . . . 64

6. Type of a Bird's Wing . . . . . 66

7. Main Feathers of the Wing, closed . . . . . 67

8. Outlines of the Bones . . . . . 68

9, 10. Outer and Inner Surface of a Seagull's Wing . 70, 71

11. Tops of the Lowest Feathers in Fig. 9 . . . . 72

12. Typical Profile of Bird Form . . . . . 90

13. (*a* and *b*). Torrent Ouzel (Outline from Bewick) . . 91

14. Turnstone (Strepsilas): Bewick's Woodcut . . . . 181

## IN "PROSERPINA"

*(Cut by A. Burgess from Drawings by the Author*[1]*)*


| FIG. | | PAGE |
|---|---|---|
| 1. | A Cluster of Moss Leaves | 209 |
| 2. | Tuft of Moss (*From "Flora Danica" and drawings by the author*) | 211 |
| 3. | Elm and Alisma Leaves (*from Plate 8 in "Modern Painters"*) | 240 |
| 4, 5. | Poppy Petals | 256, 257 |
| 6. | Trefoil, Quatrefoil, and Cinquefoil | 257 |
| 7. | Four Stages in the Young Life of a Primrose | 261 |
| 8. | The Youth of a Pease-Blossom (*Drawn and engraved by A. Burgess*) | 261 |
| 9. | The Progress of a Pease-Blossom (*Drawn and engraved by A. Burgess*) | 262 |
| 10. | Crosslet Poppy | 270 |
| 11. | Crosslet Poppy in Profile | 271 |
| 12. | Crosslet Poppy in Petals | 272 |
| 13. | Outline of a Leaf of Burdock, with Perspectives of the Elementary Form | 304 |
| 14. | Models of a Leaf of Burdock, with Perspectives of the Elementary Form | 305 |
| 15. | Draba Alpina (*From "Flora Danica"*) | 312 |
| 16, 17. | Diagrams Illustrating the Growth of Leaves | 320, 321 |
| 18. | The Ragged Robin (*From "Flora Danica"*) | 322 |
| 19. | Type of Leaves of "Monocot Plants" | 323 |
| 20. | Type of the "Arethusan" Leaf | 323 |
| 21, 22. | Diagrams Illustrating Grass Construction | 324, 325 |
| 23. | Diagrams Illustrating the Fleur-de-Lys Leaf | 327 |
| 24. | Pansy Stalk | 398 |
| 25. | Types of Petals in Violets and Pansies | 403 |
| 26. | Pinguicula Minima (*from "Flora Danica"*) | 427 |
| 27. | "Veronica Regina" (*Outline by W. G. Collingwood from "Flora Danica"*) | 441 |
| 28. | Veronica Verna (*Outline by W. G. Collingwood from "Flora Danica"*) | 445 |
| 29. | Marrow of Young Trees (*from Figuier*) | 488 |


[1] Except where otherwise stated.

| FIG. | | PAGE |
|---|---|---|
| 30. | MARROW OF YOUNG TREES (*as drawn by Ruskin*) | 492 |
| 31, 32. | SECTIONS OF A TREE BRANCH | 495, 496 |
| 33. | METHODS OF SAWING OAK TRUNKS (*adapted from Viollet-le-Duc's "Dictionary of Architecture"*) | 506 |
| 34. | SECTION OF STALK OF "SALVIA SILVARUM" | 517 |
| 35. | LEAF OF THE SAME | 518 |
| 36. | FLOWER OF THE SAME | 520 |
| 37. | FLOWER OF "SALVIA VITTATA" | 521 |
| 38. | FLOWER OF BRUNELLA: SIDE AND FRONT VIEW | 522 |
| 39. | SKETCH OF GREENHOUSE SALVIA | 525 |
| 40. | STELLA, ANAGALLIS, AND ROSE: TYPICAL FORMS | 544 |
| 41. | FLOWER OF CONTORTA PURPUREA: PROFILE AND IN FRONT | 546 |
| 42. | "CREST," "LAPPET," "CASQUE," AND "GORGET" | 546 |
| 43. | "GORGET" | 547 |


## FACSIMILES


A PAGE OF THE MS. OF "LOVE'S MEINIE" (§§ 3, 4) *Between pp.* 20, 21

A PAGE OF THE MS. OF "PROSERPINA" (vol. i. ch. vi. §§ 9, 10) „ 286, 287


---

*Note.*—Of the drawings reproduced in this volume, that of Plate I. was No. 214 in the Ruskin Exhibition at Coniston, 1900, and No. 167 at the Royal Society of Painters in Water-Colours, 1901; that of Plate II. was No. 113 in the Prout and Hunt Exhibition at the Fine Art Society (1878–1880), and No. 219 at Coniston; that of Plate IV. was No. 60 at the Royal Society of Painters in Water-Colours, and No. 413 at Manchester, 1904; and those of Plate V. were Nos. 220 and 221 at Coniston.

The drawing of Plate I. was published (by autotype process) in W. G. Collingwood's *Life and Work of John Ruskin*, 1893, vol. ii. p. 199; and that of Plate II. (by photogravure, smaller than here) in William White's *Principles of Art as Illustrated in the Ruskin Museum*, 1895, p. 523. The feather of Plate V. was published (by photogravure) as frontispiece to the book last named; and the filaments were published (by half-tone process) in *Scribner's Magazine*, December 1898. Plate XXXI. was used (reduced) on the cover of the *Catalogue of the Ruskin Exhibition*, Manchester 1904.

# INTRODUCTION TO VOL. XXV

THIS volume is devoted to Ruskin's studies of Birds and Flowers. The two books which it contains are I. *Love's Meinie*, originally published in parts between 1873 and 1881; and II. *Proserpina*, similarly published between 1875 and 1886. In an appendix to each book, additional matter is now printed from the author's MS. or from proof-sheets. A sketch of Ruskin's life from the point at which we left it in the last Introduction down to his serious illness in 1878 will explain the incomplete character of both of these books.

Ruskin reached home after his long sojourn at Venice on June 16, 1877. It had been a busy and not an unhappy time, but some of those who saw him at Venice noticed that he was sadly overtaxing his strength. "Fairly well myself," he himself noted in his diary (July 16) soon after his return, "but anxious a little about giddiness or dizziness, scarcely perceptible, but not cured since my overwork at Venice; Joanie came in evening and all was bright." Quiet hours with Mrs. Arthur Severn were what he liked best, and were best for him. "Delicious evening with Joanie," he notes again (December 19), "telling each other ghost stories." Another great and characteristic pleasure which awaited him on his return from Italy was the sight of some drawings by Turner, recently acquired for him. While he was still in Switzerland he heard of the forthcoming sale of the Novar Collection. He asked Mr. Arthur Severn to attend it on his behalf, and to buy several of the Turners. Mr. Severn bought accordingly "Carnarvon Castle," "Bridge of Narni," and "Leicester Abbey,"[1] and Ruskin was well pleased, as he told Mrs. Severn:—

"SIMPLON, *Sunday*, 10*th June*, '77.

"... I think the getting these new Turners will be of great importance to me. It will set me *on* Turner again, and I think I shall now give a course of lectures on him at Oxford, incorporating all I've said and would say of him, and add some sufficient account of his life, and so publish.

[1] See *Fors Clavigera*, Letter 85, § 8.

"The Carnarvon and Leicester were of great importance to me as perhaps his loveliest drawings of the English (British) Castle and Abbey. The sunset through the rents of the Leicester windows—the moonrise—the eddies of stream by stepping-stones—oh, isn't it beautiful?

"Love to Arfie and those funny, *funny* sweets of children."

His first entry after reaching home shows the pleasure which his new acquisition gave him:—

"17*th June, Sunday,* DENMARK HILL, HERNE HILL.—I must write both, passing my mother's window in sweet afternoon sunshine yesterday: safe home, after much labour and difficulty and some expense in persevering against winter cold. Leicester Abbey, Carnarvon, and Narni beside me; and the nightingales singing from three till now incessantly. My own old hills soft in goodly light, and I very thankful for all things—chiefly for Joanie being well and happy, and my own fairly preserved sight clear enough on the English meadows—my old nursery feeling like true home. May I value, and use, rightly, what hours remain to me in it."

Ruskin was one who ever numbered his days and applied his heart unto wisdom; but one secret of health was denied to him—he was incapable of mental rest. He knew the danger which incessant strain involved. He had been much struck, as he wrote a few years before,[1] "by the number of deaths which occur between the ages of fifty and sixty, in cases where the brain had been much used emotionally." He recognised that "the emotions of indignation, grief, controversial anxiety and vanity, or hopeless, and therefore uncontending, scorn, are all of them as deadly to the body as poisonous air or polluted water." He reflected how much of his own past life had been spent in such states; but it was beyond his power to find any remedy of emotional narcotics.

A month after his return from the Continent he spent partly at Herne Hill, partly at Oxford, and partly in paying visits. In London he went to the picture exhibitions, and wrote in *Fors Clavigera*[2] the account of the Grosvenor Gallery which, for its attack upon Whistler, was to involve him in proceedings for libel. He saw his old friends, Mr. and Mrs. Burne-Jones, and Miss Ingelow, and his newer friend, Stacy Marks. He spent some days at Cowley with the Hilliards, and he visited Birmingham, as the guest of Mr. George Baker, one of the

[1] The Introduction to *Deucalion* (Vol. XXVI.), dated July 13, 1875.
[2] Letter 79.

Trustees of the St. George's Guild, in order to inspect the Guild's property at Bewdley. The beauty of the woodland and orchards above the Severn shore greatly delighted him. Then in the middle of July he settled for some weeks at Brantwood, where the usual accumulation of proofs and letters, with the constant rush of jostling schemes and thoughts, awaited him. A year or two before, in writing the Preface to *Deucalion*, he had described, as he looked through his note-books and desks, the vast stores of material which were still unused—the material for "a history of Florentine art in six octavo volumes, an analysis of Attic art in three volumes," and so on through a list of seventy-three projected volumes. The passage was ironical; though the manuscripts which Ruskin left behind him show that he had made notes on several of the subjects, and indeed that other items might have been added to the list. Elsewhere he describes the various books which he had in progress through the press at the same time; a new one was now added to the list—*The Laws of Fésole* (Vol. XV.)—of which the first part appeared in September of this year. He was at work at this same time on *Proserpina*, on *Deucalion*, on Sir Philip Sidney's Psalter (*Rock Honeycomb*), on new editions of *Unto this Last*, and *The Two Paths*, and on the usual monthly instalments of *Fors Clavigera*. Moreover, *Mornings in Florence* was only just off his hands, and *St. Mark's Rest* was still incomplete. In October he lectured at Kendal (repeating the lecture subsequently at Eton) on "Yewdale and its Streamlets." There were some quiet and restful days for him at Brantwood—mornings on which he could note "the perfectness and brightness, and delicacy and infinite quantity to be looked at, and hayfield in front of house—all Etruscan—worked with boxes, seven or eight hundred cocks at least, spotting it in zones to the water's edge" (August 11); or evenings, with "a quite exquisite Italian sky to south with divinest jewels of white cirri, and a long riband like a Renaissance angel's sash, or Botticelli Madonna's, flying to the zenith" (August 4); and there were pleasant visits to receive or pay. He went over, for instance, to Ambleside to see Matthew Arnold, with whom, however, he was "much disappointed" (September 13); he much enjoyed a visit from Mr. T. C. Horsfall, and he received Aubrey de Vere, who was "ever so nice" (September 16). But for the most part his diary for these months tells a tale of strain and weariness.

He had, too, during these months a great anxiety in the serious illness of Mrs. Arthur Severn. He records, with thanks to God, the "priceless relief" of her recovery; and so again (October 10), "Joanie

going on well, which is everything to me." It was a period, he notes, of "profoundest emotion to me." This was in October, but Ruskin was already in an overwrought state, as may be seen from letters of the time published in *Fors Clavigera*.[1] "Feel very much overworked now," he writes (July 20), "in head and eyes;" and, again, "still anxious about sense of blood going to head" (July 23). "Dim-eyed and confused with mixture of music, Yewdale streams, and St. Mark's mosaics, buzzing in my head with free trade and Venice fruit law[2] all the morning" (August 5). "Feel up to work this morning (August 6), in any single thing, but not in two dozen." Yet he went on with the two dozen to the end. "I'm perfectly overwhelmed," he wrote to Mr. Allen (September 20), "under the quantity of things which must be kept in my mind, now, going like a juggler's balls in the air—a touch first to one, then another."

In November Ruskin went up to Oxford to deliver a course of lectures, which he entitled "Readings in *Modern Painters*" (see Vol. XXII.). These were very successful, and showed little sign of failing power, except perhaps, towards the end of the course, in a disconnectedness greater even than was usual to him in delivering lectures which had not been fully written out. He spent Christmas at Oxford, and the close of the year found him in good spirits, as the entries in his diary show:—

> "*Last day of December*, 1877, OXFORD.—Up in good time, full of fruitful thoughts, but as usual jostling one another so that I can't get to work."
>
> "1*st January*, 1878.—Began the year with Turner at Egglestone and Bolton, Okehampton and Carnarvon, putting them out to look at, as the bells of Christ Church and Merton rang in the year. Now up in good time, to my work; lighted both my fires; and had good thoughts of Immortality, as taught to us by every happy work and true soul of man."

On New Year's Day he went to Windsor for a few days on a visit to Prince Leopold. The Prince was not well at the time; Ruskin sat much with him, and was glad to be able to amuse and cheer him. They went together to a "loveliest service in St. George's Chapel," and Ruskin found his pupil "very full of good." He made some notes of the pictures and drawings in the Royal Collection, but the Castle itself did not appeal to him. "It is like being prisoner in the Tower,"

[1] *Fors Clavigera*, Letter 86.
[2] See *Fors Clavigera*, Letter 74.

he notes in his diary (January 2), "or a new modern jail, rather, with ornamental turrets." From Windsor Ruskin went to London for a few days, where he saw Carlyle and Miss Ingelow, and spent a merry evening with Stacy Marks. He then returned to Oxford, and set to work upon the new series of notes upon his collection, which have been printed in an earlier volume (Vol. XXI.). The notes themselves are bright and lucid, but Ruskin's diary shows that he felt the strain of them:—

> "*January* 9.—How maddeningly the days have flown since the new year at Windsor. Yesterday terrible work in the schools, the Principal of St. Mary's Hall writing for me[1] (Madonna help, surely), and yet such miserable heaping of impossibility on impossibility, in things that shriek out to be done, and at last—mere dreaming about impossibility, instead of doing. Up till twelve last night and at half-past five this morning—at work now, fairly lighting both fires, by quarter to seven."
>
> "*January* 10.—"I am the Lord that healeth thee." I really need my text to-day, being utterly cast down by the difficulty of managing either my health or my business, under present pressure."

From Oxford Ruskin went on a visit to Hawarden. He had dined with Mr. Gladstone in London earlier in the year; but, though he was warmly attached to Miss Mary Gladstone, he went with some trepidation into what he considered enemy's country. Mr. Gladstone, however, put him entirely at his ease, and he left Hawarden, almost persuaded to be a Gladstonian. "I have had two very happy days at Mr. Gladstone's," he wrote to Sir Robert Collins at Windsor (January 16), "—happy chiefly in enabling me to end all doubt in my own mind as to his simple and most kindly and unambitious character, and therefore to read all he says and does in its due light. It is very beautiful to see him with his family, and his family with him; and his quite naïve delight in showing me his trees went straight to my heart." Further account of Ruskin's intercourse with Gladstone will be found in a later volume, in connexion with a series of letters to Gladstone's daughter, Mrs. Drew.

From Hawarden Ruskin went to Brantwood, where yet fresh work was waiting. His acquisition of several drawings at the Novar Sale had, as he said, "set him on Turner again," and he had agreed to a proposal from the Fine Art Society that he should exhibit his

[1] See Vol. XXI. p. xxiii.

collection in London. The arrangement of the drawings, and the description of them, interested him greatly, but also taxed his strength severely. The exhibition was to open early in March; the catalogue was much in arrear, and Ruskin worked at it against time. He was interrupted by other calls upon his pen. The widow of W. H. Harrison had begged him to write an appreciation of his old friend; this piece of "autobiographical reminiscence," dated February 1, 1878, is particularly bright, clear, and sparkling. And so also is much of the Turner Catalogue. But this was work which excited no less than it interested him. "No one," he once said, "will ever understand what a Turner drawing is to me." The work of Turner was to him a microcosm; it represented to his imagination all the beauty, all the sadness, all the mystery and the suffering of the world. The artist-magician had in his latest period soared, more and more, "cloudlike and unpent," into strange regions of almost formless fancy. His interpreter, as Turner's drawings came one by one before him, found his feelings intensified, but his command over them, and the thoughts which they called up, gradually relaxed. His dreams became frequent. One of them, recorded in his diary, is significant enough of the race against time and strength which Ruskin was now running:—

> "*January* 31.—Yesterday had the divinest walk in snow since Salève times; hard and dry and rippled, like the lake, in its long wreaths beneath the grey rock ridges and their green mantlings of moss; and sunshine warm as summer; and air motionless; lake, a mirror. Found the exquisite farm under hill opposite me—nothing ever like it, I think; then pleasant chat with Susie and row home; chess with Lol, his first victory.[1] Then, a most strange nightmare of overturning a great sarcophagus down a hill in some ornamental Tuileries-like gardens, and sneaking away for fear of being caught—nobody else in the gardens for a mile; and then getting into an ugly town, and not being able to support conversation properly! and always wondering when the police would come after me,—finishing off with being left by an express train without courage to get into the carriage—every one going faster and faster past me. Like these days of January; but kind and grateful good-bye to them. They've been good to me."

The days rushed by, and Ruskin went on labouring after them. His birthday (February 8) found him "thankful to be down at seven in the morning, or only five minutes later, in good active health,

[1] Susie is his old friend Miss Beever; Lol, his secretary, Laurence Hilliard.

ready either for writing or wood-chopping, on my fifty-ninth birthday, and with so much in my hands to do for everybody." "Such things to do, such things to be!" but the strength to do them was gradually failing:—

> "*February* 9.—Only not wretched, from being weary with wretchedness in thinking of old days so selfish yet so happy; now I am kind and sorrowful."
>
> "*February* 11.—I stop writing, and get dreaming; and the light gains, and the day; and it has—how much to do, if it can; and a great deal that it must, even if it can't!"
>
> "*February* 12.—A day gained! I've been thinking it was 13th. Down in dreamy scatterment and bewilderment—the horror of this Turk war, and shame of my own selfishness and faithlessness, heavily weighing on me. Yet I slept well, and dreamed that φίλη wrote to me about R."

It was on this day that he finished the Preface to his Turner Notes, written in "the silence of lawn and wood in the dews of morning," with his thoughts set upon "those whom, by neither, I was to meet more."[1] On the next day he worked at *Fors Clavigera;* the letter shows how much he was stirred by anxiety about public affairs.[2] Dreams, visions, and spirit-messages thickened upon him. "I've done much work 'to-day,'" he wrote to Miss Anderson (February 17), "and am tired; but greatly pleased at some messages from Venice, and from other places—farther away." "I *must* get to work," he wrote in his diary on February 15, "or I shall get utterly into dreamland." Working and dreaming were alike dangerous; he chose work, and on February 21 he finished the first draft of his Turner Catalogue. It is possible to trace the connexion of the thoughts that he set down in these last-written of the Notes,[3] but the power of knitting them together—the command of form and coherence—was palpably failing. The last entry in his diary is dated February 22. Thoughts of his Lady in heaven—of loving friends on earth—of figures in favourite pictures—of the Doge Gritti and St. Ursula—jostled each other in his mind. Among the last words which came from him, before he dropped the pen, were Tintoret's saying "Sempre si fa il mare maggiore," and a verse from the *Te Deum:* "We praise thee,

[1] The passage is given in facsimile at Vol. XIII. p. 410. The writing, it will be observed, is still firm and well formed.
[2] See Letter 86, and compare Vol. XIII. p. 399 *n.*
[3] See Vol. XIII. pp. 399 *seq.*

O God, we acknowledge Thee to be the Lord." The ruling instincts of his spirit were strong even at the moment of collapse, and his mind was overthrown with the praise of God in his heart.

. . . . . .

There followed what in a blank page of his diary he afterwards called "The Dream," or (as elsewhere in it) "The Long Dream." He had fallen into a state of delirium, and for some weeks his condition caused the greatest anxiety. Daily and, afterwards, weekly bulletins were issued, and appeared in the papers, not only at home, but in America and in Italy.[1] The attack of brain fever was most severe, but Ruskin's strong constitution enabled him to conquer it. After six weeks he was able to be moved into his study, and, a month later, to resume work at the Turner Catalogue. The diary begins again upon June 18, with an entry attributing his recovery to the care of the cousin who gave and received so much love:—

"18*th June*, 1878.—On the 7th of April, this year, I got first down into my study, after illness such as I never thought to know. Joanie brought me through it. To-day I begin my Plato again.[2] If now I can but keep in peace—and quiet labour!"

Among the first letters which he wrote after his recovery were one to Prince Leopold, and another to Dr. Acland:—

"BRANTWOOD, 29*th April*, 1878.

"SIR,—Your more than kind letter has been medicinal and cordial to me, not least in the assurance it gives me of your own recovery from illness, and of your pleasure in giving sympathy to my dear Venetian 'Papa,' Mr. Brown, and to Toni, and to his doggie, which they and I alike rejoice in, more than most other creatures canine or human, I believe, being, all of us, loyal and faithful, and still, in right old Tory fashion, 'putting our trust in Princes.'

"But *I* am ready at present to treat any friend as guide rather than myself, for I have been very thoroughly out of my wits for a while—such as I had. I hope, however, that they have been only what the Scots call 'wool-gathering,' and that I may even make a web some day of what they have gathered.

[1] See Vol. XX. p. xxxiv.
[2] That is, his translation of the *Laws*.

"I am as yet, however, quite unable to write the smallest part of what I would fain say in grave answer to this most kind and thoughtful letter with which your Royal Highness encourages me to hope that I may some day obtain your help—if I yet live—in things which, alike in sickness and health, seem to me appointed for my main work under St. George and his Princes and Knights. I hope you have had at least one morning of good light for Carpaccio's chapel. Forgive—what I must as yet fail in, of better expression—and believe the unexpressed thanks, with which I remain

"Your Royal Highness's

"Faithful and affectionate servant,

"J. RUSKIN."

"BRANTWOOD, CONISTON, LANCASHIRE,
"1*st May*, 1878.

"MY DEAR HENRY,—I am getting round, I believe really. When I wrote last to you I felt so weak that I thought I should not last out April, but now I begin to think I'm good (or bad) for perhaps a May-day or two yet, after this.

"Nor am I much farther out of my wits than I always was, as far as I can judge myself. I passed through a threatening phase of humility, just after this illness left me, in that bodily weakness; but I begin to take heart of—I can't call it grace, I suppose, but of impudence again, and, as usual, begin to quarrel with my doctors first. I fancy poor John Simon went away yesterday thinking me worse than ever!

"I only write to-day, seriously, to tell you one thing of much importance to me (in case you are at any time writing to the Severns). You must not frighten Joan about me, nor think of her as able to make me do, and not do, what I am not myself disposed to do, or to leave undone. She was quite enough alarmed and shaken by my illness itself, and you, my good doctor-friends, must not put any further responsibility or anxiety on her. Her proper function is to amuse me, not to alarm—still less to be alarmed herself. I can't have her made nervous, so that she starts if I raise my voice, or thinks, if I lose my temper, that I am going to lose my wits again. I have lost my temper occasionally, before 1878, and am not likely to keep it always by me, iced and corked, even *through* 1878–1879; but the best chance of its remaining only pleasantly mousseux is in Joanie's cheerfulness. Please, therefore, send all SOLEMN orders to ME, not to her, and if I don't choose to obey, *she* can't make me.

"On the whole you will find me, I hope, as much impressed by

the fact of having passed two months in delirium as you would wish me to be. Some day, when I am stronger, I will tell you curious things of the time. You had a large part in the play yourself, as an *entirely tiresome Incredulous* person! and it greatly puzzles me to find any clue to this persistent course of imagination.

"Love to you all—though I'm even a crosser cricket[1] than I used to be, and have scarce a chirp left in me. But the flowers—oxalis and primroses with wood hyacinths—are to-day in my wood, enough to make an old stick chirp, let alone a cricket.

"Have you the English translation of Cuvier in sixteen volumes in the Museum Library?

"There are some 300 species of Ophidia in it (at a guess), and —*not* the Common Snake!!![2] which I believe I shall be the first to describe, and shall call it 'Serpens Professor.'

"Ever your loving J. R."

With what fortitude Ruskin set himself to resume the threads of his busy life—counting his mercies and seeking to "try and turn every hour to gold"[3]—we shall see when the story of his life is continued in the Introduction to a later volume. Here we need only so far anticipate the chronological order as to say, in connexion with the present volume, that the "quiet labour" which he felt to be necessary to him was at first chiefly found in studies of flowers. The first four parts of *Proserpina* (vol. i. chaps. i.–x.) had been published before his illness; the fifth appeared in January 1879; the sixth, completing the first volume, was issued in April 1879, and on February 6 in that year he noted in his diary that he was beginning work on the second volume. The publication of this was, however, prevented, partly by the interposition of quite other work (principally *The Bible of Amiens*), and then by a second illness which, at the beginning of 1881, again interrupted all his schemes. The first two parts of the second volume were issued early in 1882; but the book was then put aside, as his second Professorship at Oxford diverted him to other work. Two more parts of *Proserpina* followed in 1885 and 1886, but the writing of *Præterita* then intervened, and Ruskin's working days were destined to come to an end before the book on flowers was completed.

[1] A pet name for Ruskin in the Acland household.
[2] For Ruskin's study of snakes, see *Deucalion*, ii. ch. i. ("Living Waves").
[3] Entry in his diary for April 23, 1880.

## "LOVE'S MEINIE"

First, however, in this volume come Ruskin's studies of Birds. The title of the book—*Love's Meinie*—is one of the author's happiest, if least obvious, thoughts in this kind; it has been called a poem in two words.[1] He explains it in the Preface, reminding the reader that "Meinie" is the old English word for "many," or an attendant company—as of bridesmaids round a bride, or servants of a master, or scholars of a teacher, or soldiers of a leader, or lords of a king. "A man that is at great costes in his house," says an old translation of Xenophon's *Economist*, "and can not gette as moche as will fynde hym and his meyny." "They summon'd up their meiney, straight took horse, commanded me to follow," says Kent in *King Lear* (Act ii. sc. 4, 35). "A meignye of sparrows," says a sixteenth-century writer in paraphrasing the Bible; while earlier writers apply the pretty phrase "God's meinie" both to the angels and to the poor as objects of His special care.[2] It is well to remember these uses of the word, as they must all have entered into Ruskin's play of fancy. But he was thinking chiefly, as he says (p. 13), of "the many" of living birds which attend upon the God of Love in the *Romaunt of the Rose;* with further thoughts of St. Francis and St. Bernard, and of the lovers' litany, in similitudes from the birds, in Juliet's orchard.

The poetry of Ruskin's title is significant of the spirit in which he approached the study of ornithology. He wished his pupils to look at birds and to love them, rather than to dissect or shoot them; to study their colours, their motions, their habits, rather than their anatomy; to study them alive and as they are, not dead and as they may once have been. This was his standpoint towards natural history generally. We have seen it already in *The Eagle's Nest;* and it should be remembered in reading all Ruskin's studies in the classification of birds, flowers, and minerals. His was "popular science," and science for artists; a science primarily of aspects, not the science of essences and origins. He speaks of himself as endeavouring "to deduce from the overwhelming complexity of modern classification in the Natural Sciences some forms capable of easier reference by Art students, to whom the anatomy of brutal and formal nature is often no less important than that of the human body."[3] His

[1] "Mr. Ruskin's Titles," by Mrs. E. T. Cook, in *Good Words*, July 1893.

[2] See Murray's *New English Dictionary*, whence I collect these instances. See also *Fors Clavigera*, Letter 28, § 14.

[3] Preface to *Aratra Pentelici*, Vol. XX. p. 197.

ambition was to formulate simple grammars of ornithology, botany, and mineralogy, which should familiarise young students "quickly and easily with the general aspects"[1] of natural objects, and at the same time connect the study with art and literature. Ruskin states his point of view again in a letter to Dean Liddell, to whom he submitted some chapters of *Proserpina* for critical comment. "The value of the system depends, you must please remember," he wrote (December 1, 1878), "on its incorporation with the teaching of my new elements of drawing, of which the first vital principle is that man is intended to *observe* with his eyes, and mind; not with microscope and knife." If for "man" we might read "artist" and "young student," Ruskin's contention would probably receive universal assent; and that he himself sometimes had the distinction in his mind is clear from the lecture in which he differentiates "the office of the keeper of a [popular] museum and the occupation and function of a leader in science."[2] Ruskin's care, as he says in the same place, was for the plumage, not for the anatomy; and it was in this spirit that he gathered his materials for *Love's Meinie*. "He collected an enormous number of skins—to compare the plumage and wings of different species. He had models made, as large as swords, of the different quill-feathers, to experiment on their action and resistance to air."[3] He also purchased from H. S. Marks, R.A., a large collection of drawings (now at Oxford[4]), and he himself made many others at the Zoological Gardens and the British Museum. His drawings were as faithful as care could make them; his pen-pictures were meant to be suggestive, and were touched with fancy. He describes the swallow as "an owl that has been trained by the Graces. It is a bat that loves the morning light. It is the aerial reflection of a dolphin. It is the tender domestication of a trout."[5] So, in *The Queen of the Air*, he calls the nightshade "a primrose with a curse upon it";[6] and in *Deucalion*, says of the squirrel, that it is "more like a sunbeam than a living creature."[7] A distinguished man of science sagely remarks of such descriptions that they would be "useless for natural history purposes."[8] The only question that is apposite is whether they are

[1] See the beginning of his Kirkcudbright Catalogue in Vol. XXVI.
[2] See Vol. XXII. p. 519.
[3] W. G. Collingwood's *Life and Work of John Ruskin*, 1900, p. 302.
[4] See Vol. XXI. p. 227; other drawings by the same artist are in the Ruskin Museum at Sheffield.
[5] See below, p. 57.
[6] Vol. XIX. p. 369.
[7] *Deucalion*, i. ch. xii. § 40.
[8] Lord Avebury, F.R.S., in *St. George*, vol. vi. p. 13.

true, beautiful, and vivid as far as they go, and are calculated to stimulate thought or fancy.

*Love's Meinie* is, as Ruskin says, a fragment only of what he intended, and it is a combination of two not wholly congruous schemes. It was first taken up as a course of Oxford lectures on "Greek and English Birds"; but afterwards Ruskin began to turn it into a handbook of English birds. In a "Note," at one time circulated with his publisher's list, Ruskin referred to "the change in the plan of *Love's Meinie*, from a limited series of University Lectures to a Schoolbook of Ornithology," as "the chief cause of the delay in the publication of the third lecture on the Chough." This, he added, is "now in the press—but displaced, so as to become the fourth in order." At a later date he said that he had been unable to go on with *Love's Meinie* "from the mere distress and disgust of what I had to read of bird-slaughter."[1] The first draft of some of the book is contained in one of the large ledgers already described;[2] and it seems that the lecture on the Halcyon was meant to be the first of the course. This lecture was, however, detached for use in the course entitled *The Eagle's Nest*. The three lectures actually delivered at Oxford, as a course on Greek and English Birds, dealt with the Robin, the Swallow, and the Chough respectively. The Oxford lectures excited much interest, and occasionally some little indignation. In the first lecture (§ 29), Ruskin delivered himself of an amusing skit on Darwinism—then, it must be remembered, a new theory, not perhaps too well understood. Certainly Darwin himself would have been surprised to hear himself credited with such a theory as Ruskin, in his fun, propounded. "Amusement," says Dean Kitchin, "filled those who knew Ruskin's ways; amazement, those who did not."[3] But the lecturer in part meant his skit to be taken very seriously, and in the succeeding lecture he returned to the subject—in graver tones, and with an apology for his previous raillery (§ 58).

The third of the Oxford lectures, on the Chough, like that on the Halcyon, was concerned very largely with the classical myths of the birds. It was put in type and corrected by Ruskin, but he held it over, hoping to find time to prepare engravings.[4] At a later date, when he resumed work on the book, he changed his plans; the "lectures on Greek and English birds" were to become "a study of British birds, which would have been occasionally useful in museums, carried

[1] Lecture of 1884 on "Birds" (in a later volume of this edition).
[2] Vol. XX. p. xlix.
[3] *Ruskin in Oxford, and Other Studies*, p. 41.
[4] See *Fors Clavigera*, Letter 60, § 1.

out with a care in plume drawing, which I learned in many a day's work from Albert Dürer"; or, again, a "grammar of zoology," parallel with *Deucalion* and *Proserpina*.[1] Towards the execution of this later scheme Ruskin wrote a "Lecture III.," on the Dabchick, going somewhat into classification, and an appendix entering into further particulars. It is thus impossible to place "the Chough" as the third lecture, and it is now printed at the end of the book. Ruskin had collected much material for continuing the work; and he refers (pp. 67 *n.*, 68 *n.*) to a "complete edition" which he intended to prepare with more elaborate illustrations. This, however, was never done. From the MS. material a few notes are now taken (pp. 175–184). The rest is too incomplete to be printed, and much of the material consists, not of writing of his own, but of communications from friends or abstracts by his secretary from various books on birds.

The *manuscript* of the greater part of the first lecture, on the Robin—written on twenty-six sheets of ruled foolscap—is in Mr. Wedderburn's possession, having been given to him by Ruskin. Comparison of this with the text shows that the lecture was much revised and rearranged for publication; two passages are here added in footnotes (pp. 19, 24), and a page is given in facsimile (p. 20). The manuscript of the rest of the book (as originally published) is not known to the editors, with the exception of a few fragments (§§ 81–83 and § 153 to the end). These, together with other material related to *Love's Meinie*, are now bound up in a volume at Brantwood. From this source the lecture on the Chough is here given; it is put together from a printed proof (headed "Lecture III."), which is corrected by Ruskin, and dated August 30, 1873, and from several sheets of MS. in the author's hand marked "Chough. New Copy." From the same MS. volume the Notes I.–IV. (pp. 174–183) are taken. Note V., on "The Myth of Autolycus and Philammon," is from the Oxford ledger, above mentioned (p. 184).

The usual details about the *text* will be found in the Bibliographical Note, but the book was never revised by the author.

## "PROSERPINA"

Ruskin's book on flowers, which like that on birds was never completed, was published in Parts between the years 1875 and 1886. It collects the studies, thoughts, and fancies of a much longer period, though many of them on the same subject are to be found also in

[1] See *Fors Clavigera*, Letter 67, § 12.

*Modern Painters*, the *Queen of the Air*, and in other of his books.[1] "I begun my studies of Alpine botany," he says,[2] "in 1842;" but other studies intervened, and the botany had to wait its turn. The last volume of *Modern Painters* brought him partly back to it, but not till 1866 did it become a principal study with him.[3] "I am working at botany and mineralogy with some success," he wrote to Professor Norton in August of that year. His French sojourn in 1868 gave fresh zest to the botany, as may be seen in parts in *The Queen of the Air*, written on his return, and it was in the autumn of that year that he wrote what became the first chapter of *Proserpina*. During his Swiss tour in 1869 botany was still much in his mind, and, though his call to Oxford now came, he still hoped, as we have seen, to find time to finish his book before it went "off the boil."[4] "I write every day, if possible," he told Professor Norton in November 1869, "a little of my botany. . . . It is to be called *Cora Nivalis*, 'Snowy Proserpine': an introduction for young people to the study of Alpine and Arctic wild flowers." The press of his Oxford work, however, prevented the book on flowers being finished at that time. Five years later he once more took it in hand, writing pieces of it, as we see from the headings to chapters or sections, sometimes at Brantwood, and sometimes on his travels — at Rome, for instance, Lucca, Florence, Knaresborough. Much of the book was printed and published by the end of 1877, when his illness broke it off yet again. From a work thus written in snatches, and at long intervals of time, nothing very systematic or complete must be expected.[5]

The autobiographical interest of *Proserpina* is, however, perhaps the greater for its scattered character. The personal note is struck in its sub-title: "Studies of Wayside Flowers while the air was yet pure among the Alps and in the Scotland and England which my Father knew." In a charming chapter (p. 451) he describes, as afterwards in *Præterita*, the delights of travel in the olden time, when he jumped out from the carriage to gather or sketch the wayside flowers. His thoughts in writing *Proserpina* were largely of the meadows of Clarens,

[1] See General Index.

[2] See his Introduction to *Proserpina*, § 8 (p. 204); and compare his "Letter to a College Friend" of September 19, 1842: "I got really rather fond of flowers at Chamonix, for there nature uses them as I say—not to deck a bank, but to paint a mountain" (Vol. I. p. 474).

[3] See *Time and Tide*, § 115 (Vol. XVII. p. 413).

[4] Vol. XIX. p. lxi.

[5] The dates, which may be collected from chapter vii. of the second volume (pp. 483–484), show how many interruptions there were. The chapter was written in 1878; revised in 1878–1879 (when, as he says, he was sixty); kept till 1883; printed in 1885.

the rocks of the Vosges, the glens of Jura, and the woods of Montanvert; of the *arbres de Judée*, seen by many a French town; of the wild lilies-of-the-valley at St. Laurent, the gentians at Morez in the Jura, the narcissus-meads of Vevay. In those earlier years, however, though Ruskin loved and painted the flowers, he collected no systematic material. At a later time he began to study them more intently. Nothing was too small or too common to attract the artist's eye in him. A passage or two in letters to his father from Savoy in 1862–1863 may be given as characteristic of his way of studying:—

> "MORNEX, *September* 16, 1862.—I am much revived and pleased this morning by a crimson convolvulus and three nasturtiums on my white breakfast-table. I never saw before what a wonderful thing a nasturtium was, in the set of it on the stalk. . . . These four flowers give me more pleasure than I have in a whole greenhouse; first, because I have not in them more than I can attend to at a time; secondly, because they are fresh, pure, and with the natural cloud dew of morning on them."
>
> "TALLOIRES, *April* 18, 1863.—If either Angelico or Leonardo were here just now, they would paint a foreground of periwinkles. It is quite new to me, the starry loveliness of this flower, in masses, mixed with ivy on grey rocks; whole beds of it as large as the roof of our greenhouse, covering pieces of broken rock as large as the greenhouse itself. I noticed to-day for the first time the peculiar windmill form of the flower . . ." [sketches].

His botany stood fast for some years, he says elsewhere, "at the point where I broke down in trying to draw the separate tubes of thistle-blossom."[1] The opening chapter of *Proserpina* is very characteristic of the way in which Ruskin thus studied; what he did himself, and what he invites his readers to do, is to look closely into common things. He brings to them everywhere eyes full of wonder.

In 1877, when Ruskin was returning from Venice, *Proserpina* was coming out in parts, and he stayed a while among the Alpine flowers to study, catalogue, and draw them.[2] Extracts from his diary—other

[1] *Fors Clavigera*, Letter 51, § 16.

[2] Messrs. Newcome's *Catalogue of Autograph Letters*, 1890, contained the following extract from one by Ruskin:—

> "DOMO D'OSSOLA, *30th May*, '77.
>
> "MY DEAR YOUNG FRIEND,—I am very glad to have your letter saying you like *Proserpina*. So do I; and would fain work at it, but have had more serious business lately, affecting the interests of thousands. I hope to get back to the wild flowers for some rest, and to send you some more *Proserpina* this summer."

The extract was reprinted in the privately issued *Ruskiniana*, 1890, part i., p. 111.

STUDY OF BRANTWOOD THISTLE

LIBRARY OF
CALIFORNIA

than those which he copied out into the book—will show the kind of notes which he made:—

> "Domo d'Ossola,—Torrent Rockfoil (Francesca) best.[1] Found 29th May, '77, in masses like tossed foam, of pure white, on the dark grey gneiss rocks, above the waterfalls to the north of Domo d'Ossola. The commonest rockfoil of these southern Alps. A cluster of thick, succulent, aloe-like leaves some two or three inches long, close to the rock, borne up, diminishing gradually by the central virga,[2] in a rudely successive order, tending to throw itself into triple groups, two leaves near each other, opposite, and one above, half-way round between them, a branch bearing clusters of flowers, springing above each leaf; itself again a smaller image of the whole flower, having tiny leaves, it also, and little branches above them bearing the flowers, but even these third-order branches showing tendency to bear little leaves again. The flowers pure white, not spotted, with pale russet calyx and dim pink stamens, the white petals little more than repetitions of the green leaves in general form. The whole plant more or less hairy and glutinous; the hairs, at the edges of the green leaves, changing into white serrations increasing along the Arabian arch of the leaf's summit—suddenly sinking at its point, Fig. *a* [sketch] showing the structure only, there being some eighty to one hundred serrations where I have thirty; Fig. 6 [sketch] shows the twisting power of the leaf in profile.
>
> "The number of blossoms on this plant was approximately 1100. I had pulled off three of the lower branches first, with (by Hugh Allen's count) seventy flowers on them; then there remained forty-three branches on this stem, with these numbers of flowers on them" [details, bringing up the total to 1105].
>
> "Isella, *June* 5.—Francesca Dispersa. The meadows here, or at least the rocks among richness of meadow, full of it. Flowers scattered at the ends of long straggling branches, and not pretty in effect; though, seen close, very beautiful; standing up just like shuttlecocks, petals white with rich purple spots, which fade downwards and pass somewhat suddenly into dull yellow towards centre of flowers . . ." [references to sketches].
>
> "*June* 6.—Francesca Terrestris. Among the moss in low rocks, a star of battledore-shaped leaves, which I've been half-an-hour vainly trying to draw."

Then comes a letter to Mrs. Severn, telling of the various flowers he found on a mountain ramble:—

> "Simplon, *8th June*, '77.—I'm in a little better spirits to-day—that 'War in the nursery' quite cheered me up with the humour

[1] *i.e.*, the best name for it, another suggested in the diary being Dew Rockfoil (Francesca roscida).

[2] For this term, see p. 316.

of it. What quaint, wonderful things children are. Also, I've been getting on with *Proserpina* a little—the Alpine flowers yesterday in the higher ravines and pastures were unspeakable. Fancy our deep purple meadow orchis—you know it in Brantwood field—twice as large as ours, richer in colour, and set—on the average—six in a square yard, with as many bell gentians between—a mosaic of purple and *that* blue!—touched every now and then into light by the most golden of all golden flowers, the geum montanum (describable only as a yellow rose growing on the ground)—this gleaming among the purple just like a bit of gold in Byzantine mosaic.

"I hate sending flowers in letters, but this sprig of earthly-minded little beauty who always looks down, pure as Aurora all the while, can't surely squeeze out anything totally ugly."

The next notes are again from the diary:—

"*June* 8.—Furred Anemone. In its perfection an entirely exquisite type of symmetrical hexfoil cup, as severe in structure as a tulip, but more firm and pure in line—set in another cup formed of the green fibres of its holding leaf. These fibres are dark russet green, beset with quantities of fibres of the exact texture of the finest silky amianthus, these fibres a lovely fox-brown, gleaming continually into light out of shade; grey at the base and casting brown shadow on the violet cup above, which, however, itself is browned at the base. The outer petals, nearly all violet; the inner, white with violet centres, like crocus. The interior, white; and the rose-like stamens, golden. But the violet itself is a most mysterious tone; made first by the finest possible granulate powdering of purple on the white ground—then over this, at the base of the petal, minutest granulation of purple-black; and all this seen through a mist of close-set amianthoidal down, palest fox-colour at base, passing up into silver-grey so delicate that it only makes the colour dim, seen in front, and its real depth and even existence are only manifest in the leaf profile. The interior sides of the petals are smooth. In the centre of the stamens is a pillar of delicate green fibres; as the flower ripens, the stamens wither, and this green cluster enlarges into a mass which quite fills the flower, and rises above the petals which darken and close round it as they fade—the whole flower, in dying, ambitious, rising high above the cup of green branches that first held it . . ." [references to sketches].

"Brieg, *June* 11.—Rose-Star. I must find some lovely name for this—gathered by Hugh Allen yesterday and brought down with us from high Simplon. The aim of the plant is not grace, but a quaint order of leaves apparently independent and going in all

directions, as if a company of ants had suddenly been turned into leaves; or a number of people in a crowd incapable of getting into order by position had fitted themselves in with friendly inlaying of elbows, looking all the while this way and that. It lies flat on the ground, more like a sprinkled handful of grains of corn than a plant. Then the flowers really grow at the ends of the branches, being of a crisp crystalline texture, as if cut out of snow; the consecration of the state of a rose leaf frost-bitten, not into weakness, but into shrinking;—if one could fancy a rose-leaf minute, first, to such a jewel minuteness; and, then, jagged a little at the edges and candied—the red of it going to the end of the petal, as the red goes to the tips of one's ears in a frosty morning . . ." [sketches again].

With studies such as these among Alpine flowers *Proserpina* combines the record of Ruskin's observations in his own home at Brantwood, or among the moors of the Lake District and Yorkshire. "No manner of temperance in pleasure," he says, "would be better rewarded than that of making our gardens gay only with common flowers."[1] With some concessions to himself, who liked to plant narcissus to remind him of Vevay, and to Mrs. Severn, who is a lover of garden-flowers, this was the pleasure which Ruskin sought in his grounds at Brantwood. The house is terraced above the hillside, and behind it the woods rise sharply to the moorland. To cut paths in the woods, to make the moorland blossom, to lead the streams—these were among his constant pleasures. The visitor to Brantwood who went for an afternoon ramble with his host would be taken, if in spring time, through a mist of wild hyacinths, to a clearing in the wood, where, at "Fairfield Seat," a view of the lake and mountains bursts open; or, if in autumn, up to the moor, bright with heather and bracken, and rich in wild raspberries and strawberries. It was here that Ruskin once attempted to reclaim a portion of the moorland, in order to show what might be done in bringing wild places under cultivation. The planting of corn was his first experiment, but, this not proving successful, the ground is now occupied by fruit trees. Further down the hill was a woodland garden, seen in the frontispiece; this was at one time his special resort. On the upper side the garden was enclosed by an old stone wall, mossy and ivied; on two sides, by a wooden paling:—

"The fourth side was unfenced, but parted from the wood by a deep and steep water-course, a succession of cascades (unless the weather were dry, which is not often the case at Coniston) over hard slate rock. He used

[1] See ii. ch. iv. § 1, p. 451.

sometimes humorously to complain of the trouble it cost him to keep the beck clear of stones, and he could deduce you many a lesson in geology on the way its rivulet filled, rather than deepened, its bed. . . . Over the bridge and within the wood there were frequent hummocks and bosses of rock pushing through the soil, and each with its special interest of fern or flower. Many a visitor must have recalled or repeated—

'Who loved the little rock, and set
Upon its head the coronet?'[1]—

while Ruskin led the way, pointing out each trail of ivy (convolvulus not allowed for fear of strangling the stems) and nest of moss, as a gardener of the other species might point out his orchids."[2]

Ruskin, Mr. Collingwood explains, was in fact more the landscape-gardener than the gardener. He let his coppice grow until it became like the background of an early Italian picture. But he was a landscape-gardener with a difference, "and in the old garden below, though he did not create it, you can trace his feeling in the terraced zigzag of paths, hedged with apple and the cotoneaster[3] which flourishes at Coniston, and filled in with sloping patches of strawberry and gooseberry."

The drawings here introduced (Plates I., II., and III.) are examples of the foreground studies which Ruskin made, and the cabinets of the Drawing School at Oxford contain many other studies of flowers and leaves, done during these years at Brantwood. Many a passage in *Proserpina* tells, too, of his pleasure in the wild plants—the whortleberries, hyacinths, and periwinkles, and other familiar flowers—that fill "the clefts and crest the ridges of his Brantwood rock" (i. ch. xii. § 1). And so, too, when he wished to study the ways and growth of trees, he would go out into his woods to collect his specimens. "I am going during my wood-chopping," he writes to Miss Beever, "really to ascertain in my own way what simple persons ought to know about tree growth, and to give it in next number."[4] Miss Susan Beever of the Thwaite, to whom the letters of *Hortus Inclusus* were addressed, was a neighbour who was much interested in flowers, and many of the pages in that volume refer to *Proserpina*.

Ruskin's serious illness in the spring of 1878 interrupted *Proserpina*, as it caused all other work to be put aside; but the study of flowers was the first which he was able to resume. "I want ever so many things

[1] From Wordsworth's poem beginning "Who fancied what a pretty sight."
[2] "Ruskin's Gardening," ch. iii. in *Ruskin Relics*, by W. G. Collingwood.
[3] See Plates XXX. and XXXI. in this volume (pp. 535, 536).
[4] *Hortus Inclusus*, 1887, pp. 59–60 (reprinted in a later volume of this edition).

John Ruskin

Allen & Co Sc

STUDY OF MOSS, FERN, AND WOOD-SORREL

CALIFORNIA

STUDY OF BRANTWOOD THISTLE

STUDY OF MOSS, FERN, AND WOOD-SORREL

Drawn by J.Ruskin. Engraved by George Allen.

**STUDIES OF SAXIFRAGE.**

indulgence to them. I felt as if they might seem to you only a form of continuous fantasy remaining from my illness; nor do I myself look for the slightest effect upon the scientific world while I live; but if I do live a few years more the collation of what I have systematised for the first time in Art Education with what I had learned of natural science in pure love of it, and not in ambition of discovery, will form a code of school teaching entirely separate from the technical formalities of each several branch of science as now pursued, and which I believe many parents and children will thank me for. But whether useful, or accepted, or forgotten, my own health and peace are promoted by the mere *selfish* interest I take in the study, and I allow no thoughts of its vanity to disturb me. Those drawings of the heath trees you promise me will be of extreme value. I am only just now really attacking the question of modes of growth and their arrest, though I began the collection of evidence for it thirty years ago.

"Ever gratefully and respectfully yours,

"J. RUSKIN.

"I do not mean 'selfish' in the sense of ambitious, but that I must draw the bit of oak-bough on the table to-day for my own pleasure, whether anybody else cares for the drawing or not."

Steady progress with *Proserpina* was rendered impossible by the many other tasks which Ruskin had in hand, but at intervals during the next eight years (1879–1886) he resumed it, and some passages which he wrote in his note-books (the first, however, of an earlier date) show how, from time to time, he made observations or wrote pieces intended for use in future numbers:—

"BRANTWOOD, *Aug. 14th*, 1876.—Yesterday, found the anagallis[1] in perfect beauty under a little cascade which gleams and glitters down a rent in the basalt of Yewdale crag.

"A cushion of moss, perfectly dark brown velvet, with warm glow on it as if it were woven out of the sunshine of autumn and night-darkness; on this first set, more or less towards the outside of the cushion, so as to leave a dark space within, crowded clusters of the pale sphagnum moss — wreathed together like little star-fish, not golden, but the colour of green grass with sunlight on it. Then partly over the brown centre, partly over the green embroidery, were laid eight or nine stars of sundew, giving it an entangled network of

[1] For notes on the Anagallis tenella (pimpernel), see below, p. 543.

it would give "a better foundation for the knowledge of flowers in the minds of young people" than more pretentious treatises (pp. 456, 480).

The limitation of his scope explains the confidence with which, though a beginner, he commended his work to the reader. The book is not a scientific treatise; it did not pretend nor desire to be so. Ruskin was not in reality so contemptuous of modern science, as his attacks on some of its methods, pretensions, and professors might lead a hasty reader to suppose. He was not so ignorant or narrow-minded as to suppose that there was no proper place for the science which classifies and analyses, in accord with, or in the effort to discover, origins and essences; which has an equal eye for all kinds of facts—for hidden aspects, latent processes, ultimate causes, as well as for phenomena on the surface. Ruskin's attitude was simply that this was a kind of science which did not interest him, and which he never pretended to study, but that there was another kind of science which, for purposes of general education, he held to be more important, which appealed to him as a lover of the beautiful in art and nature, and in which he could claim to give some light and leading.[1] In the second Preface to *Modern Painters* (1844) he had drawn a distinction between the botanist's study of flowers, and the poet's or the painter's.[2] *Proserpina* gives us the botany of the poet and the painter.

Ruskin's attitude to some branches of the science of botany is well shown by his horror of all researches into the relations of insects to flowers. He had no patience with "nasty" carnivorous plants (p. 414); and when he was on a visit to Sir John Lubbock, and his host described his experiments with bees, he was made simply miserable.[3] So, again, "when we are told," he writes, "that the leaves of a plant are occupied in decomposing carbonic acid, or preparing oxygen for us, we begin to look upon it with some such indifference as upon a gasometer."[4] All such researches offended Ruskin's artistic sense; he did not deny their importance; he passed them by as "ugly mysteries" into which he had no desire to pry. He was similarly uninterested in the artificial cultivation and cross-breeding of plants; he left the "cur-breeding florists" severely alone (p. 439); the swollen varieties were coarse alike in outline and in colour as compared with the simpler flowers (p. 407). It is interesting to note that Ruskin's general point

[1] Compare Ruskin's account of what he would, and would not, desire to find in a book about bees: *Fors Clavigera*, Letter 51, § 9.

[2] See Vol. III. p. 36.

[3] Lord Avebury recalls the incident in *St. George*, vol. vi. p. 2; and see a letter in *Hortus Inclusus* (reprinted in a later volume of this edition).

[4] *Modern Painters*, vol. ii. (Vol. IV. p. 153).

of view is taken by a living artist who has devoted much study to flowers and their ways:—

"As to the colour and beauty of flowers being intended to serve for the perpetuation of the species, how is it (writes Mr. G. D. Leslie) that the ivy, white clover, mignonette, and a host of other inconspicuous flowers draw more bees and flies round them than many brighter and showily coloured plants do? I do not believe the beauty of the plant has much to do with it; for bees and flies, unless I have been misinformed, have exceedingly short sights, their eyes being made with great magnifying power and adapted solely for close-inspection work. It seems to me they must be guided by their scent instinct, whatever that may be; the same instinct that leads them to the flowers teaches them the way back to their hives. What I want to fight for is the beauty of the flower. I do not want to have any use attached to it, except the glory of the Creator and the delight of eyes capable of seeing that glory. Mere perpetuation of species could be attained without all this elaborate display of beauty. I also hold with Mr. Ruskin that the blossom is the culminating glory and perfection of a plant's life—all further ripening of seed being effected during the plant's decadence, and with a view to a further display in following years."[1]

The same writer notices the dull and forbidding descriptions of flowers which now confront a reader even in many popular books about botany, and which contrast very unfavourably with the more graphic and interesting pages of the old writers, such as Gerard (often quoted in this volume). Here, again, Mr. Leslie is in complete accord with the author of *Proserpina*. Ruskin's artistic sense, as that of a master in the art of language, was offended by the barbarous nomenclature of the botanists. He resolutely refused to read about a fruit "dehiscing loculicidally" (p. 462), and determined that his botany should have nothing to do with things pubescent-reticulate-venose-subreniform or ovate-acuminate-fimbrio-denticulate (p. 400). He chaffed the botanists soundly in such matters—taunting them also not a little with the narrow limits of their knowledge. To say that the green of leaves is due to green-leaf, does not become a sufficient explanation merely by translating green-leaf into Greek[2] (p. 232). He ridiculed the passion for turning every term into Latin or Greek, and suggested that Greek botanists should repay the compliment by talking of Insidebornides

[1] *Letters to Marco*, by George D. Leslie, R.A., 1893, pp. 242, 243, 246.

[2] Compare the passage in *The Storm-Cloud of the Nineteenth Century*, § 66, where he says that his own care in the choice of words makes him perhaps "somewhat morbidly intolerant of careless diction," and asserts that "no good science was ever written in bad English."

(p. 321) and Nutleafides (p. 318). He asked why none of the botanists would tell him what sap is. The answer is, I suppose, that this is still an unsolved question; the mechanism by which the sap flows without valves or forcing-pump, apparently, and the nature of the propelling force remain to be discovered. Science is not yet omniscience. Ruskin's criticism of botanical systems of classification has, I imagine, this amount of scientific authority, that no such systems can be anything more than tentative and arbitrary. If it be true, as Darwin showed, that the tendency to variation is continuous, and that there is thus no fixed or essential difference between a species and a genus, or a genus and an order, then it follows that principles and details of classification may be matters of free choice, to be judged by the degree in which they collect instructive resemblances, and by the purposes, fruitful or idle, for which they are made. Ruskin's remarks on this subject in chapter xi. (p. 359) are specially worth attention. With Darwin Ruskin continued the friendly relations which were described in a previous volume.[1] The two men were in some degree not sympathetic. Ruskin could not feel interested in the insectivorous habits of plants, and Darwin could see nothing to admire in Turner's drawings. One strong bond of sympathy they had, however, in love of the Lake country where Ruskin had fixed his home. "Although some of Darwin's æsthetic tastes had suffered a gradual decay, his love of scenery remained fresh and strong. Every walk at Coniston was a fresh delight, and he was never tired of praising the beauty of the broken hilly country at the head of the lake."[2] Darwin frequently spent his holidays in the Lake country, and Ruskin's diary records visits by him to Brantwood in 1879, and again early in 1881. Ruskin chaffed men of science, as I have said, and sometimes allowed himself in passages, destined to stand, a freedom of contemptuous comment which his admirers must deplore. When he assumed magisterial robes omniscience became his foible; but in reality he was perfectly conscious of his own limitations, and he was ever ready to sit at the feet of masters in their several subjects. His letters to Sir Oliver Lodge, printed in *St. George*,[3] may be referred to in this connexion. His obligations, in botanical matters, to Professor Oliver are recorded in *Proserpina* (p. 331), though that distinguished botanist (himself, too, an amateur artist) regarded Ruskin, I fear, as a quite incorrigible pupil.

Ruskin's book about flowers was not intended, then, to be "scientific."

[1] Vol. XIX. pp. xliv., xlv., 358 *n.*
[2] *Life and Letters of Charles Darwin*, vol. i. p. 129.
[3] Reprinted in a later volume of this edition.

What it did intend is partly indicated by the title, and by the motto on the title-page. The myth of Demeter and her daughter Proserpine (or Cora) is a symbol of the earth-mother—at once the origin of all life, and "the receiver of all things back at last into silence. And, therefore, as the most tender image of this appearing and fading life, in the birth and fall of flowers, her daughter Proserpine plays in the fields of Sicily, and thence is torn away into darkness;"[1] returning, however, in each year from the under-world, and thus becoming a symbol of the miracle of Spring. Hence in his connexion of various flowers with Greek mythology, Ruskin gives the fleur-de-lys to Cora, "it being quite the most lovely expression among plants of the floral power hidden in the grass, and bursting into luxuriance in the spring."[2] And so, in this volume, he connects with the kingdoms, respectively, of Cora and Kronos the two orders of annual and perennial plants.[3] The motto Ruskin took from the exquisite lines of Perdita which he had noticed in the second volume of *Modern Painters*, bidding us observe how the poet's imagination "goes into the very inmost soul of every flower, after having touched them all at first with that heavenly timidness, the shadow of Proserpine's."[4] The choice of such a title may be held to imply three things, for Ruskin's titles, as he says, were not arbitrary,[5] but were selected in order to tell those who had ears to hear exactly what he meant. First, then, his study of flowers was to be pursued in reverent acknowledgment of a living and informing spirit. The lines of Tennyson express what was Ruskin's attitude, as he picked or drew a botanical specimen:—

> "Flower in the crannied wall,
> I pluck you out of the crannies,
> I hold you here, root and all, in my hand,
> Little flower—but *if* I could understand
> What you are, root and all, and all in all,
> I should know what God and man is."

"I am in the habit," he explains, "of thinking of the Greek Persephone, the Latin Proserpine, and the Gothic St. Ursula as of the same living spirit; and so far regulating my conduct by that idea as to dedicate my book on Botany to Proserpina."[6] The feeling which

[1] *Queen of the Air*, § 11 (Vol. XIX. p. 304).
[2] "Notes on the Educational Series," Vol. XXI. p. 113.
[3] See below, p. 368.
[4] *Modern Painters*, vol. ii. (Vol. IV. pp. 255–256).
[5] See *Ariadne Florentina*, § 27 (Vol. XXII. p. 315).
[6] *Fors Clavigera*, Letter 88, § 6.

he chiefly sought to feed was that of wonder, in the presence of the workings of the Spirit of Life (p. 318). He saw in the perfect flower the crown and rejoicing of the spirit of life. When describing his childhood among the Herne Hill almond blossoms, he says that "very early indeed in his thoughts of trees he had got at the principle given fifty years afterwards in *Proserpina*, that the seeds and fruits of them were for the sake of the flowers, not the flowers for the fruit."[1] Next it was the beauty of flowers that he meant to examine; his science was to be of aspects, not of origins nor much of functions; he wanted to direct his readers to pretty instead of ugly mysteries (p. 200); he put aside, as beyond his purpose, anything that involved the aid of the microscope (p. 435). And then, thirdly, he sought to associate the study of flowers—their modes of growth, their specialities of form and colour—with the place which they have held in the thoughts and fancies, the mythologies and the literature, the art and the religion of the civilised world. Flowers, sacred to Proserpine—flowers, sung by Shakespeare; flowers, celebrated in Greek poetry or chosen by the Hebrew prophets to point their morals; flowers, whose colours rival the purple of the Cæsars, or whose forms suggested types of architecture—these were the associations which Ruskin desired his scholars to have in mind when they plucked a wayside blossom or sat down to draw a leaf. There are many books of "floral fancies," and as a rule they are among the most vapid forms of literature. What distinguishes Ruskin's *Proserpina* is not only the originality of his own genius, but the interweaving of his play of fancy with exact observations of natural forms and the curiously wide and suggestive range of his associated ideas. A critic of Ruskin—herself a poet and a delicate observer—has noted as a wonderful "feat of illustration, allusion, and intricate history" the chapter in *Proserpina* on the poppy:—

"Ruskin's persevering eye saw the poppy confused with the grape by the Byzantine Greeks, and the poppy and the grape with palm fruit; saw the palm, in the stenography of design, pass into a nameless symmetrical ornament and thence into the Greek iris; saw it read by the Florentines, when they made Byzantine art their own, into their fleur-de-lys, with two poppy heads on each side of the entire foil in their finest heraldry; saw, on the other hand, the poppy altering the acanthus-leaf under the chisel of the Greek, until the northern worker of the twelfth century took the thistle-head for the poppy, and the thistle-leaf for the acanthus; . . ."[2]

[1] *Præterita*, i. ch. ii. § 59; and see below, p. 249.
[2] *John Ruskin*, by Mrs. Meynell, pp. 254–255.

and so on, until from the poppy of our fields we reach Brunelleschi's dome. *Proserpina* is rich in such passages; but the play of fancy and the wealth of associated ideas are combined with minute observation of the more tender beauties of plant-forms which he describes in language not less exquisite than his drawings. The man of science whom I have quoted above upon *Love's Meinie* has remarked also[1] upon the delightful descriptions in Ruskin's botanical passages; as, for instance, that of the grape-hyacinth as "a cluster of grapes and a hive of honey distilled and compressed together into one small boss of celled and beaded blue";[2] or this, of the poppy, "a burning coal fallen from Heaven's altars" (p. 253).

The habit of associating one study with another was one of Ruskin's leading principles in education. *Proserpina* may, in one aspect of it, be described as a series of drawing-lessons in flowers. The author's art-lessons were to be in companionship with his school-book on flowers.[3] The reader was "to associate his study of botany, as indeed all other studies of visible things, with that of painting" (p. 392). But it was also to be a grammar of botany for general students, as distinguished from scientific specialists. For such students he cared only to describe varieties which could easily be found, and to discuss qualities which were discoverable on the surface. His point of view is shown in nothing better than the new system of classification and nomenclature which he proposed and in part adopted. This was to be founded, first, on obvious (not latent) resemblances between plants; and, secondly, upon connexions with the thoughts and histories of men. His object was "to associate in our memory the flowers which truly resemble, or fondly companion, or, in time kept by the signs of Heaven, succeed, each other; and to name them in some historical connexion with the loveliest fancies and most helpful faiths of the ancestral world" (p. 436).

He did not carry his scheme very far, and sometimes himself forgot his own classification (p. 474); also he retouched it as he went along (p. 480). He hoped that young scholars would find it easier to learn the new names than he found it to forget the old ones (p. 438 *n.*). A new system is hardly likely to be adopted unless it be complete, and Ruskin's "grammar of botany" will remain for use in his "island of Barataria."[4] Yet, fragmentary as his essay in classification is, to many

[1] Lord Avebury, in *St. George*, vol. vi. p. 15.

[2] *Queen of the Air*, § 83 (Vol. XIX. p. 374). For other references to the flower, see below, p. 389, and Vol. VI. p. 422.

[3] *Fors Clavigera*, Letter 59, § 5.

[4] See *A Joy for Ever*, § 65 (Vol. XVI. p. 59).

readers of *Proserpina* the common flowers of England and the Alps will receive some fresh significance from the pretty names which Ruskin's fancy found for them, as it played around their forms, their uses, and their associations. And few readers, I think, will say that the author does not fulfil in this book the promise which he made at the outset: namely, that it should at least be his own, and readable (p. 216)—readable alike for its original play of thought and fancy, and for its "honest English, of good Johnsonian lineage, touched here and there with colour of a little finer or Elizabethan quality" (p. 430).

At a later date Ruskin projected yet another manual of botany, on simpler lines than those followed in *Proserpina*. He was impressed with the waste of "exquisite original drawings and sketches of great botanists, now uselessly lying in inaccessible cupboards," and he wanted to see them utilised to illustrate simple handbooks of wild flowers, "regardless of any but the most popular names," but "teaching children the beauty of plants as they grow, and their culinary uses when gathered."[1] In 1887 he made an experiment in this sort with a class of the school children at Coniston, as described in *Christ's Folk in the Apennine*.[2] It seems to have been in connexion with this class that he wrote a few pages of "Children's Botany," in the form of question and answer, somewhat in the style of *The Ethics of the Dust*. The pages are bound up at Brantwood with the notes for *Proserpina*, but these "Institutes of Botany" (as some of the pages are headed) did not go far enough to make them worth printing. It will be remembered[3] that Ruskin at one time intended to issue, in addition to *Proserpina* (which was more especially devoted to flowers) a series of reprints from *Modern Painters*, collecting passages in that book dealing with trees. An undated letter to his publisher refers to this scheme:—

> "I think the re-issue in parts, with good margins, highly desirable; but for real illustration of my present books, it is absolutely necessary I should add photographs from my drawings, or from the real things (capitals, etc.). Only so, can I at all give the body of my accumulated materials. . . . The etching you send me is in nice state, and I shall use it, such as it is, with the Strength of Old Pine, the Villeneuve, and some more—Dryad's Crown especially—for the illustrative part connected with botany of *Modern Painters*.

[1] *Fors Clavigera*, Letter 94, § 20.
[2] Chapter iv. ("The Nun's School in Florence").
[3] See Vol. III. p. xlix.

> I shall add some new chapters to the old ones, on the botany of the Coniferæ, and call the whole something in connection with the Forest Cantons."

Notes on the Coniferæ are among Ruskin's papers, but these also are too slight and scrappy for publication.

A part of the *manuscript* of *Proserpina* is preserved at Brantwood. This includes, of volume i., Chapters VI., VII., XI., XII., and the first Index, and of volume ii., Chapters III. (a small portion only), IV., and VIII. There have also been found in print "Chapter X. Of Caprice in Flowers," and "Chapter XI. Of Wildness in Flowers" (with part of the MS.), "Chapter XII. Myrtilla Pretiosa" (unfinished), and "Chapter XIII. Anagallis Tenella" (also unfinished). There is also a large quantity of notes intended for use in the continuation of the second volume; the notes are partly in print (for Ruskin's convenience, not as being ready for publication) and partly in manuscript. The two additional and finished chapters, mentioned above, are now included in the book; while the unfinished two, and some of the notes, are printed in an appendix.

A page of the MS. is given in *facsimile* (p. 286), and a few notes are taken from it (*e.g.*, pp. 286, 295, 356, 499, 500). Ruskin's copy of the book at Brantwood contains a few notes and corrections (see pp. 219 *n.*, 220 *n.*, 289 *n.*).

With regard to the arrangement of the *text*, the two additional chapters are printed at the end of volume ii., Ruskin's final observations being transferred to the conclusion of them (p. 535 *n.*). A few minor rearrangements are described in the Bibliographical Note (p. 194). The Indices, made by Ruskin himself and hitherto printed at the end of volume i., are now given at the end of volume ii., the flowers mentioned in the latter being added to the lists. The references have also been made more complete.

Of the *illustrations* in this volume, the plates are, with the few exceptions specified in the List (p. xiii.), from drawings by the author.

One of these exceptions is the *frontispiece*, which is reproduced by the three-colour process from an oil-picture by Mr. Arthur Severn, R.I. It shows the woodland garden at Brantwood—one of Ruskin's favourite haunts, as we have seen—on a sunny day in spring.

The plates given in this Introduction are of studies made at Brantwood by Ruskin. Thus we have the "Brantwood Thistle" (I.),

a characteristic example of his studies of foreground-detail; a study of "Moss, Fern, and Wood-sorrel" (II.), another example of the same kind; two studies of "Frost-bitten Saxifrage," dated "31 Dec. '74, Brantwood" (III.), of which the lower one repeats and enlarges a portion of the upper. This plate was prepared for *Proserpina*, but has not hitherto been published. The drawing of the thistle is at Brantwood; that of "Moss, Fern, and Wood-sorrel" is in the Ruskin Museum at Sheffield; it is in violet on grey paper ($5\frac{1}{2} \times 10$). Mr. William White, in his *Principles of Art as Illustrated in the Ruskin Museum* (p. 523), appositely cites one of Ruskin's early verses in connexion with this drawing:—

> "Give me a broken rock, a little moss,
> A barberry-tree with fixèd branches clinging,—
> A stream that clearly at its bottom shows
> The polished pebbles with its ripples ringing;—
> These to be placed at Nature's sweet dispose,
> And decked with grass and flowers of her bringing;—
> And I would ask no more; for I would dream
> Of greater things associated with these . . .
> For Nature's work is lovely to be seen;
> Her finished part, as finished whole, will please."[1]

Ruskin showed the drawing at the Prout and Hunt Exhibition of 1879–1880 (No. 113), in illustration of the sculpturesque forms of common wayside plant growth, in relation to wood and stone carving: until architects are "absolute masters," he says, "of sculptural surface, founded on natural forms, they do not know the meaning of any good work, in any school."[2] This is one of several studies in which Ruskin practised what he preached in *The Elements of Drawing*. "All banks," he there says, "are beautiful things, and will reward work better than large landscapes;" and, again, "Make intimate friends of all the brooks in your neighbourhood."[3] Of this particular study Mr. White well observes that "the amount of actual drawing in it, although it appears to be very minute is not really so, the fineness of the delicate outline of the weeds being only suggested by dexterous touches, and not in reality drawn. All the work of the great artists, as Mr. Ruskin has shown, was performed in this manner"—distinct enough, as to

[1] Vol. II. pp. 411–412.
[2] Vol. XIV. p. 436. Compare *Lectures on Architecture and Painting*, Vol. XII. p. 93.
[3] Vol. XV. pp. 109, 110.

general intent, but with an element of indistinctness, mystery, suggestion in manipulation.[1]

The plates, now introduced into *Love's Meinie*, are examples of Ruskin's studies of birds. The one placed as frontispiece to that book (IV.) is of the "Pelecanus Crispus"; this study of a pelican is one of a large number of different birds which Ruskin made from life at the Zoological Gardens. Two of them may be seen in the Oxford Collection (Rudimentary Series, Nos. 189, 193). The drawing is at Brantwood (pencil and white on grey paper, $6\frac{1}{2} \times 9$).

The next plate (V.) is made from Ruskin's studies of peacock's feathers; it shows a breast feather of the natural size, and two detached rays of the same feather magnified five times. The drawings are in the Ruskin Museum at Sheffield (water-colour). The breast-feather is the one referred to in *Fors Clavigera* (Letter 60, § 5), and in some of the letters in *Hortus Inclusus*. Ruskin made a great many studies of this kind, and took infinite pains with them. It was on such studies with the pen or brush that the analysis of the exquisite structure of feathers, which is to be found in his books, was based. The reader may be referred in this volume to pp. 35 *seq.*; to *The Laws of Fésole*, Vol. XV. pp. 397 *seq.*; and, in a later volume, to the lecture on "Birds," delivered at Oxford during Ruskin's second Professorship.

The drawing shown on the next plate (VI.) is of the Avocet (*Recurvirostra avocetta*). The engraving was made by Mr. Hugh Allen from a photograph of the drawing. "Young, real size" is written by Ruskin on the drawing. The avocet is one of the wading birds (*Grallatores*), allied to the Snipes and Stilts, specially distinguished by its flexible upturned beak. Gould gives an interesting account of the way in which the beak is used:—

"Those who have seen a stork, or a crane, take a worm or a frog by the tips of its long mandibles, and, with an upward movement of the head, drop it into its throat, will have a good idea of the actions of the avocet when it has captured a small shrimp, a marine insect, or any other object upon which it lives; and will at once perceive that, with such a peculiarly formed beak, it could not feed in any other manner. . . . How much it is to be regretted that a bird so attractive in its general appearance, and so singular in its form as the avocet, should be nearly extirpated from our island! Yet such is unhappily the case; for although it was formerly abundant, it is now very rarely to be met with. . . . Most wantonly has

[1] *Modern Painters*, vol. iv. (Vol. VI. pp. 80, 81).

the avocet been shot down, with no other object than the pretence that its feathers were suitable for making artificial flies (which they are not), or for the chance of sale in the London market as an article of food."[1]

A note by R. C. Leslie, among Ruskin's papers connected with *Love's Meinie*, refers to such extermination:—

"A flock of about twenty of these very rare birds (avocets) came here (Southampton) in January 1881; they were very tame, and I am sorry to add that I fear most of them were shot in consequence. I saw five or six of the flock in one bird-stuffer's here."

There are sketches of the bird by H. S. Marks, R.A., in the Sheffield Museum.[2]

The next two plates (VII. and VIII.) were issued by Ruskin with the seventh part of *Deucalion*. They "were engraved," he explained, "for illustration of beak-structure in *Love's Meinie;* but may be of some present use here; and are better printed than lying by to rust." They were thrown into *Deucalion* only because Ruskin had given up the idea of continuing *Love's Meinie;* in this edition of the Works they are transferred to their more appropriate place.

We now come to the plates in *Proserpina*. These comprise the twenty plates issued by Ruskin with that book, together with three now introduced. Ruskin and his engravers took great pains with these plates, which he designed not merely to illustrate his text, but also to serve as drawing copies (pp. 205, 289, 536); they were separately issued for that purpose (p. 193).

The first (IX.) is of Common Heath, "Blossoming—and Stricken in Days"; Ruskin explains on p. 371 why he selected the subject for frontispiece to *Proserpina*.

The next plate (X.) is one of a series (XVIII., XIX., XX., and XXI. being the others) of woodcuts by Arthur Burgess, of which Ruskin noted the educational purpose by lettering them as "Line-study I., II.," and so on. The pen-drawing by Ruskin, from which the first Line-study is engraved, was in Mr. William Ward's possession; an impression of the woodcut is in the Oxford Art Collection (Educational Series, No. 15). Line-studies II., III., and IV. (Plates XVIII.–XX.) are reduced copies from *Flora Danica;* the subjects are all intended to illustrate "the foliation of annual stems" (p. 316).

[1] *Birds of Great Britain*, vol. iv., No. 52.
[2] See also Ruskin's note on Bewick's *Birds* (vol. ii. p. 158).

Line-study V. (p. 318) is from a pen drawing by Ruskin, now in the collection of Mrs. Cunliffe.

Plate XI. is an engraving by Mr. G. Allen (especially praised by Ruskin[1]) of the author's study of a Laurel Leaf, seen underneath and in profile. The study is No. 9 in the Educational Series at Oxford, and in the catalogue of the collection Ruskin notes its use as a drawing copy (Vol. XXI. p. 58). The study is given in *Proserpina* as the "central type of leaves," or the Apolline type, as he calls it (p. 238).

The next two plates (XII. and XIII.) again serve the author's double purpose. They are examples of "two different methods of drawing, both useful according to character of subject" (p. 289); they also illustrate the text, as examples of what he calls "states of adversity" in leaves (*ibid.*). "I am immensely delighted with these plates," wrote Ruskin to Mr. Allen (March 22, 1874), "coming to them with a fresh eye. The Thistle leaves are perfect."

Plate XIV.—engraved by Mr. Hugh Allen—has not hitherto been published. It is from a drawing made by Ruskin in Malham Cove, of Geranium Lucidum and Herb Robert, and referred to in the text (p. 293). Ruskin in a letter in *Hortus Inclusus* (November 21, 1878) refers to the study as just the drawing that nobody but himself could have made—"nobody! because it means ever so much careful watching of the ways of the leaf, and a lot of work in cramp perspective besides."

Plate XV.—engraved by Mr. George Allen—is also new. It is of the Knapweed, a plant which lives in the company of thistles, and is therefore introduced in Ruskin's chapter dealing with them.

The next plate (XVI.)—the Waste Thistle, drawn to illustrate "occult spiral action"—is described in the text (p. 309).

Plate XVII. is, again, a new plate, engraved by Mr. George Allen, from drawings by Ruskin of the daisy.

The remaining plates have all appeared before, and are all described or referred to in the text; the placing of some of them has been altered in this edition (see p. 193). Ruskin again notes, in the case of the last two, that they were intended, not only to illustrate the text, but also to serve as drawing copies (p. 536). Similarly with regard to Plate XXIII. ("Contorta Purpurea") he says in *The Laws of Fésole* that it was engraved in a particular way in order to serve as an example of the method by which the colour of a flower and

[1] See Vol. XXI. p. 110 (No. 9)

texture of a leaf may both be suggested (Vol. XV. p. 480). "This orchis plate," he wrote to Mr. Allen (September 20, 1877), "is not only our best, but it is one of the finest things ever done on steel. It cannot be bettered (so far as we either of us have tried to go): *you* have done all that could be done, and I, as much as could be done in a given time."

The woodcuts are (with the few exceptions stated in the list, p. xvi.) by Arthur Burgess, to whose "consummate skill" Ruskin bears testimony (p. 205).

The illustrations in this volume are fairly representative of the variety and range of Ruskin's artistic studies in botany, but the reader who desires to be acquainted with their full extent should visit the Oxford Collection.[1]

E. T. C.

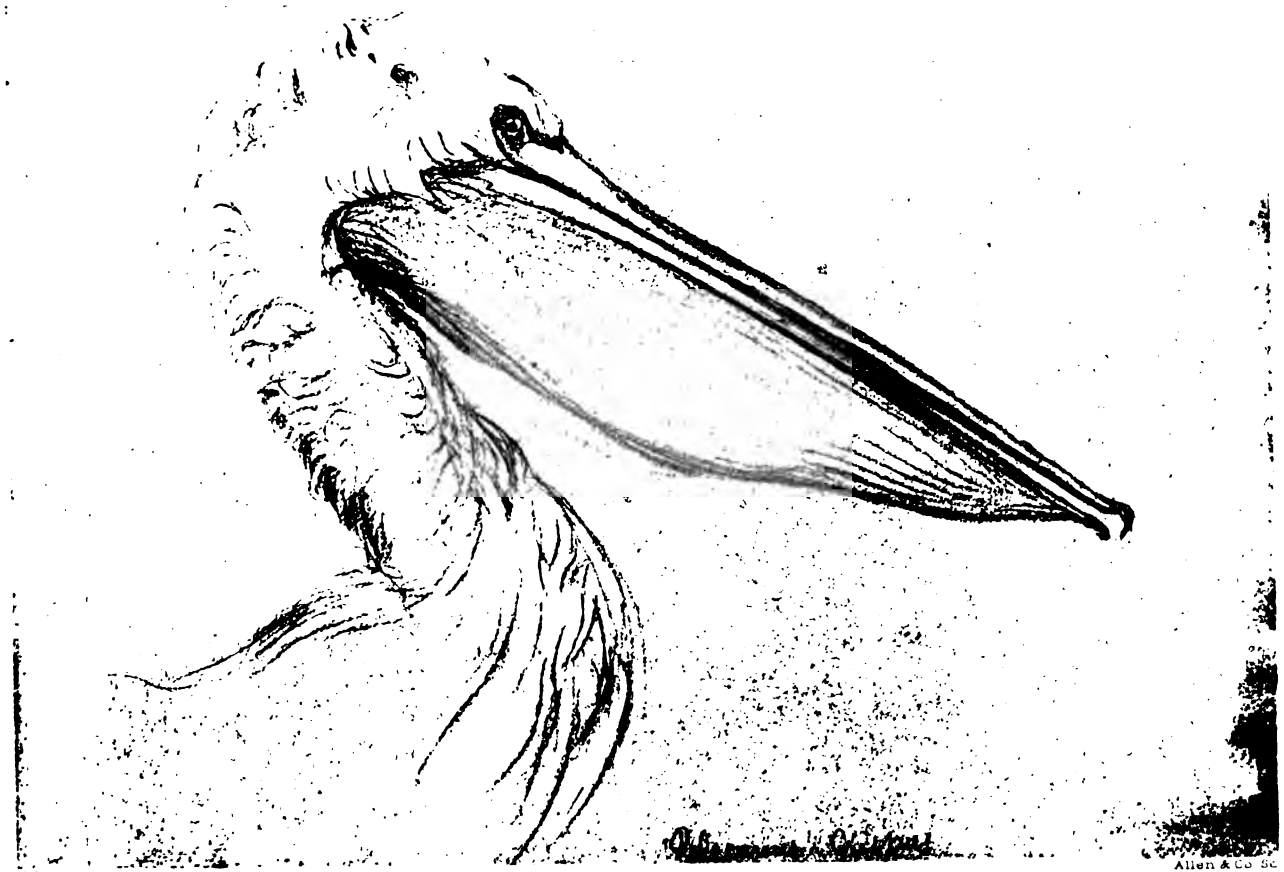
[1] See the index in Vol. XXI. pp. 321–322.

# I

# LOVE'S MEINIE

(1873–1881)

Univ. of
California




PELECANUS CRISPUS

# LOVE'S MEINIE.

## LECTURES

ON

## GREEK AND ENGLISH BIRDS.

BY

JOHN RUSKIN, LL.D.,

HONORARY STUDENT OF CHRIST CHURCH, OXFORD; AND HONORARY FELLOW OF CORPUS CHRISTI COLLEGE, OXFORD.

VOLUME I.

GEORGE ALLEN,
SUNNYSIDE, ORPINGTON, KENT.
1881.

[*Bibliographical Note.*—The contents of the volume called *Love's Meinie* were in part delivered as lectures at Oxford. These were announced (*University Gazette*, March 4, 1873) as "Three Lectures on English and Greek Birds as the Subjects of Fine Art." They were delivered as follows:—

Lecture i. "The Robin," March 15 and 20.
,, ii. "The Swallow," May 2 and 5.
,, iii. "The Chough," May 9 and 12.

The second lecture was also delivered at Eton College, in two instalments, on May 10 and May 17, 1873. The lecture on the Chough is now for the first time published. Lecture iii. in the printed volume, on the Dabchicks, was never delivered.

The Eton lecture is briefly noticed, though not reported, in the *Eton College Chronicle* of May 15 and June 4 (pp. 756, 762). In a copy of *Sesame and Lilies*, presented by Ruskin with other of his books to the School Library, there is the following letter referring to the lecture:—

"CORPUS CHRISTI COLLEGE, OXFORD,
*19th May*, 1873.

"DEAR MR. BROWNING,—I spoke with very literal truth when I told the boys I had never been so much helped by anything as by their sympathy with me, and pleasure in what I tried to show them; and they have encouraged me to do what I seldom venture—to ask their acceptance of the series of my revised books, which I am now publishing, if with the permission of the Provost and masters, they may be placed in the Library of the Literary Society. I have desired my publisher, therefore, to send to you the five volumes at present published, together with the inaugural lectures given at Oxford, and if you would be so kind as to present them to the society from me, it will give me more pleasure than any honour done my books yet.

"And whatever I can do in any other way to be of any use to the school shall always be at its masters' command.

"Believe me, dear Mr. Browning,
"Ever faithfully yours,
"J. RUSKIN.

"The woodcuts from Burgmaier may be of some use as copies for pen drawing. They are the finest things in black and white line, for practice, that I know."

The volume was first published in three parts (1873–1881).
Part I. (1873).—The title-page of this part was as follows:—

Love's Meinie. | Lectures | on | Greek and English Birds. | Given before the University of Oxford. | By | John Ruskin, LL.D., | Honorary Student of Christchurch, and Slade Professor of Fine Art. | Lecture I. The Robin. | G. Allen, Heathfield Cottage, Keston, Kent. | 1873.

Octavo, pp. 41. Title-page, pp. 1–2; imprint on the reverse, "Printed by

Watson and Hazell, London and Aylesbury." Advice (here p. 11), pp. 3–4. Lecture I., pp. 5–41.

Issued on July 24, 1873, with cut edges, in paper wrappers of a pale grey colour, with the title-page (enclosed in a double-ruled frame) reproduced upon the front, with the addition of the rose above the publisher's imprint, and "Price One Shilling" below. 1000 copies.

A second edition of this part (1000 copies) was issued in April 1883. The words "Second Edition" were on the title-page of the part. No alteration was made in the text. A third edition (150) was issued in 1892.

Part II. (1873).—The title-page was the same as in Part I., except for the substitution of the words "Lecture II. The Swallow."

Octavo, pp. iv.+43–83. Title-page and Advice, pp. i.–iv. Lecture, pp. 43–83.

Issued in August 1873, with cut edges, in wrappers as before.

A second edition of this part also (1000 copies) was issued in 1883, again without alteration in the text. The words "Second Edition" were added on the title-page. A third edition (200) was issued in 1892.

Part III. (1881).—The title-page of this part was as follows:—

> Love's Meinie. | Lectures | on | Greek and English Birds. | By | John Ruskin, LL.D., | Honorary Student of Christ Church, Oxford; and Honorary Fellow of | Corpus Christi College, Oxford. | Lecture III. The Dabchicks. | George Allen, | Sunnyside, Orpington, Kent. | 1881.

Octavo, pp. iv.+85–195. Title-page, pp. i., ii.; imprint on the reverse, "Hazell, Watson, and Viney, Printers, London and Aylesbury." List of birds noticed in the lecture (here p. 10), p. iv. Lecture, pp. 85–168. Appendix, pp. 169–195. The twelve preliminary pages for volume i. (see below) were also given with this part, and they were used in binding up copies of all editions in the octavo form. Collectors should thus note that the volume title-page with the date 1881 does not prove the volume to be of the first edition.

Issued in November 1881, with uncut edges, in paper wrappers of a buff colour, with title-page (enclosed in a double-ruled frame) reproduced upon the front, with the rose as before, and, below the publisher's imprint, "Price Half-a-Crown." 2000 copies.

The paragraphs were numbered consecutively as far as § 111, but the numbering then ceased.

Part IV. with two plates was advertised as in preparation, but the announcement was subsequently withdrawn, and no more of the intended book was issued.

The separate parts thus enumerated formed volume i. for purchasers to bind up. The collation of the volume thus bound is as follows: Half-title, pp. i.–ii. Title-page (as here printed on the preceding leaf), pp. iii.–iv. (imprint on the reverse, "Hazell, Watson, and Viney, Printers, London and Aylesbury." Preface (here pp. 13–15), pp. v.–ix. Contents (here p. 9), pp. xi.–xii. Lectures, pp. 5[1]–168. Appendix, pp. 169–195. Headlines as in this edition.

[1] The lectures begin with p. 5, because in the case of Part I. the title-page, etc., had been numbered pp. 1–4 (see above).

In July 1882 the volume was issued bound in mottled-grey paper boards. On the back was a white paper label, lettered "Ruskin. | Love's | Meinie. | Vol. I." Price 4s. 6d.

In June 1883 copies of the second edition of Parts I. and II. were bound up with copies of the first edition of Part III.

In 1893 there was a similar issue of the book in volume-form, made up with copies of the third edition of Parts I. and II. This issue was put up in cloth boards. The price was raised in July 1900 from 4s. 6d. to 5s.

*Small Edition* (1897).—The title-page of this edition (which is still current) is as follows:—

> Love's Meinie | Three Lectures on | Greek and English Birds | By | John Ruskin, LL.D., D.C.L. | Honorary Student of Christ Church, Oxford; and | Honorary Fellow of Corpus Christi | College, Oxford | Third Edition | George Allen, Sunnyside, Orpington | and | 156, Charing Cross Road, London | 1897 | [*All rights reserved*].

Crown octavo, pp. xii. + 240. Preface, pp. i.–ix. Contents, p. xi. Lectures, pp. 1–188. Appendix, pp. 189–219. Index, pp. 223–240.

Issued in April 1897 (2000 copies). In green cloth boards. Price 5s.; reduced in January 1904 to 3s. 6d.

In this edition the numbering of the paragraphs is continued from § 111 to the end of the book (including the Appendix); the "Advice" is not given; the list of birds, formerly given before Lecture iii., is given in the Appendix; an Index (by Mr. Wedderburn) is added; and a few references are supplied.

There have been some *unauthorised American* editions of the book.

---

*Variæ Lectiones.*—There are no variations of text to record, except that in the present edition a few mistakes have been corrected. In § 3 an erroneous reference to *Ariadne Florentina* (added in the Small Edition) has been corrected. In § 39, line 5, the Small Edition misprints "had" for "have." § 112, line 22, "Irene" in previous editions; reference to the magazine cited by Ruskin shows that the actual name was "Irma." In § 148 (sixth line from bottom of p. 142) "fifth" is here a correction for "third." In § 149, "Maronette" has hitherto been misprinted for "Marouette"; and (fourth line from end) "Kiolo" is here a correction for "Piolo."]

# CONTENTS


PAGE

ADVICE (1873) . . . . . 11

PREFACE (1881) . . . . . 13

LECTURE I

THE ROBIN . . . . . 17

LECTURE II

THE SWALLOW . . . . . 45

LECTURE III

THE DABCHICKS . . . . . 74

APPENDIX . . . . . 133

(ADDED IN THIS EDITION)

THE CHOUGH . . . . . 152

NOTES FOR AN INTENDED CONTINUATION OF "LOVE'S MEINIE":—

I. A PLEA FOR THE PIES . . . . . 175

II. "WHY A SWALLOW HAS A SWALLOW-TAIL?" (BY R. C. LESLIE) 177

III. STREPSILAS INTERPRES . . . . . 180

IV. FLAT-BILLS AND KNIFE-BILLS . . . . . 182

V. THE MYTH OF AUTOLYCUS AND PHILAMMON . . . . 184

INDEX OF BIRDS MENTIONED . . . . . 185

Names of the birds noticed, according to the author's system, with reference to the sections of the text and the Appendix in which the reader will find their more melodious scientific nomenclature:[1]—

| | | | Sect. | | Sect. |
|---|---|---|---|---|---|
| I. | *Rutila Familiaris.* | *Robin Redbreast* | Text 1 | *seqq.* | App. 141 |
| II. | *Hirundo Domestica.* | *House Swallow* | ,, 41 | *seqq.* | ,, 142 |
| III. | *Hirundo Monastica.* | *Martlet* | ,, — | | ,, 143 |
| IV. | *Hirundo Riparia.* | *Bank Martlet* | ,, — | | ,, 144 |
| V. | *Hirundo Sagitta.* | *Swift* | ,, 64 | | ,, 145 |
| VI. | *Hirundo Alpina.* | *Alpine Swift* | ,, — | | ,, 146 |
| VII. | *Noctua Europæa.* | *Night-jar of Europe* | ,, — | | ,, 147 |
| VIII. | *Merula Fontium.* | *Torrent Ouzel* | ,, 89 | | ,, 148 |
| IX. | *Allegretta Nymphæa.* | *Lily Ouzel* | ,, 93 | | ,, 149 |
| IXA. | *Allegretta Maculata.* | *Spotted Allegret* | ,, 96 | | ,, 149 |
| IXB. | *Allegretta Stellaris.* | *Starry Allegret* | ,, 97 | | ,, 149 |
| IXC. | *Allegretta Minuta.* | *Tiny Allegret* | ,, 98 | | ,, 149 |
| X. | *Trepida Stagnarum.* | *Little Grebe* | ,, 100 | | ,, 150 |
| XI. | *Titania Arctica.* | *Arctic Fairy* | ,, 111 | | ,, 151 |
| XIA. | *Titania Inconstans.* | *Changeful Fairy* | ,, 114 | | ,, 151 |
| XII. | *Rallus Aquaticus.* | *Water Rail* | ,, 116 | | ,, 152 |
| XIIA. | *Pulla Aquatica.* | *Water Hen* | ,, 133 | | ,, 153 |

[1] [In the first edition, the list began with the present No. VIII., and faced the first page of Lecture III., being headed "Names of the birds noticed in the following lecture . . ." In the edition of 1897, Nos. I.–VII. were added by the editor for the sake of completeness, and the list was printed after § 140.]

# ADVICE

[ISSUED WITH PART I., 1873]

I PUBLISH these lectures at present roughly, in the form in which they were delivered,—(necessarily more brief and broken than that which may be permitted when time is not limited),—because I know that some of their hearers wished to obtain them for immediate reference. Ultimately, I hope, they will be completed in an illustrated volume, containing at least six lectures, on the Robin, the Swallow, the Chough, the Lark, the Swan, and the Seagull.[1] But months pass by me now, like days; and my work remains only in design. I think it better, therefore, to let the lectures appear separately, with provisional woodcuts, afterwards to be bettered, or replaced by more finished engravings. The illustrated volume, if ever finished, will cost a guinea; but these separate lectures a shilling, or, if long, one shilling and sixpence each. The guinea's worth will, perhaps, be the cheaper book in the end; but I shall be glad if some of my hearers felt interest enough in the subject to prevent their waiting for it.

The modern vulgarization of the word "advertisement" renders, I think, the use of "advice" as above, in the sense of the French "avis" (passing into our old English verb "avise"), on the whole, preferable.

BRANTWOOD,
*June*, 1873.

[1] [Ultimately a third lecture on the Dabchicks was included; the lecture on the Chough is now added; the proposed lectures on the Lark, the Swan, and the Seagull were not written.]

# PREFACE

[ISSUED WITH THE COMPLETION OF VOLUME I., 1881]

BRANTWOOD, *9th June*, 1881.
*Quarter-past five, morning.*

THE birds chirping feebly,—mostly chaffinches answering each other, the rest discomposed, I fancy, by the June snow;* the lake neither smooth nor rippled, but like a surface of perfectly bright glass, ill cast; the lines of wave few and irregular, like flaws in the planes of a fine crystal.

I see this book was begun eight years ago;—then intended to contain only four Oxford lectures:[1] but the said lectures also "intended" to contain the cream of forty volumes of scientific ornithology. Which intentions, all and sundry, having gone, Carlyle would have said, to water, and more piously-minded persons, to fire, I am obliged now to cast my materials into another form: and here, at all events, is a bundle of what is readiest under my hand. The nature and name of which I must try to make a little more intelligible than my books have lately been, either in text or title.

"Meinie"[2] is the old English word for "Many" in the sense of "a many" persons attending one, as bridesmaids, when in sixes or tens or dozens;—courtiers, footmen, and the like. It passes gradually into "Menial," and unites the senses of Multitude and Servitude.

In the passages quoted from, or referred to in, Chaucer's

* The summits of the Old Man, of Wetherlam, and Helvellyn, were all white, on the morning when this was written.

[1] [It seems, however, from the "Advice" that the book was intended ultimately to contain six lectures.]

[2] [Compare the Introduction, above, p. xxix.]

translation of the *Romance of the Rose*, at the end of the first lecture,[1] any reader who cares for a clue to the farther significances of the title, may find one to lead him safely through richer labyrinths of thought than mine: and ladder enough also,—if there be either any heavenly, or pure earthly, Love, in his own breast,—to guide him to a pretty bird's nest; both in the Romances of the Rose and of Juliet, and in the Sermons of St. Francis and St. Bernard.[2]

The term "Lecture" is retained, for though I lecture no more,[3] I still write habitually in a manner suited for oral delivery, and imagine myself speaking to my pupils, if ever I am happily thinking in myself. But it will be also seen that by the help of this very familiarity of style, I am endeavouring, in these and my other writings on Natural History, to compel in the student a clearness of thought and precision of language which have not hitherto been in any wise the virtues, or skills, of scientific persons. Thoughtless readers, who imagine that my own style (such as it is, the one thing which the British public concedes to me as a real power[4]) has been formed without pains, may smile at the confidence with which I speak of altering accepted, and even long-established, nomenclature. But the use which I now have of language has taken me forty years to attain; and those forty years spent, mostly, in walking through the wilderness of this world's vain words, seeking how they might be pruned into some better strength. And I think it likely that at last I may put in my pruning-hook with effect; for indeed a time must come when English fathers and mothers will wish their children to learn English again, and to speak it for all scholarly

[1] [See below, pp. 40 *seq.*]

[2] [For St. Francis and the birds, compare Vol. IV. p. 149, and Vol. XXIV. p. 267; and for St. Bernard's sermon on the animals "good to look at, more profitable to the hearts of those who gaze on them than to the bodies of those who use them," see J. C. Morison's *Life and Times of Saint Bernard of Clairvaux*, 1868, p. 181.]

[3] [At this time Ruskin was no longer Professor at Oxford; but he resumed the Chair in 1883. Lectures i. and ii., and the one now added on the Chough, were actually delivered; Lecture iii. was not.]

[4] [Compare below, p. 513; Vol. XXII. pp. 125, 302.]

purposes; and, if they use, instead, Greek or Latin, to use them only that they may be understood by Greeks or Latins;* and not that they may mystify the illiterate many of their own land. Dead languages, so called, may at least be left at rest, if not honoured; and must not be torn in mutilation out of their tumuli, that the skins and bones of them may help to hold our living nonsense together; while languages called living, but which live only to slack themselves into slang, or bloat themselves into bombast, must one day have new grammars written for their license, and new laws for their insolence.

Observe, however, that the recast methods of classification adopted in this book, and in *Proserpina*, must be carefully distinguished from their recastings of nomenclature. I am perfectly sure that it is wiser to use plain short words than obscure long ones; but not in the least sure that I am doing the best that can be done for my pupils, in classing swallows with owls,[1] or milkworts with violets. The classification is always given as tentative; and, at its utmost, elementary: but the nomenclature, as in all probability conclusive.

For the rest, the success and the service of all depend on the more or less thorough accomplishment of plans long since laid, and which would have been good for little if their coping could at once have been conjectured or foretold in their foundations. It has been throughout my trust, that if Death should write on these, "What this man began to build, he was not able to finish," God may also write on them, not in anger, but in aid,

"A stronger than he, cometh."[2]

* Greek is now a living nation's language, from Messina to Delos[3]—and Latin still lives for the well-trained churchmen and gentlemen of Italy.

[1] [See §§ 57, 62, 88. For the classification of the milkwort (polygala) with the violet in the order "Cytherides," see *Proserpina*, pp. 353, 356.]

[2] [Luke xiv. 30, xi. 22.]

[3] [Compare *Proserpina*, i. ch. viii. § 29 (below, p. 318); and see a letter of Ruskin's, dated December 4, 1853, describing conversations with Professor J. S. Blackie on this subject (Vol. XII. p. xxxv.).]

# LOVE'S MEINIE

"Il etoit tout couvert d'oisiaulx."
—*Romance of the Rose.*[1]

## LECTURE I*

### THE ROBIN

1. Among the more splendid pictures in the Exhibition of the Old Masters, this year, you cannot but remember the Vandyke portraits of the two sons of the Duke of Lennox.[2] I think you cannot but remember it, because it would be difficult to find, even among the works of Vandyke, a more striking representation of the youth of our English noblesse; nor one in which the painter had more exerted himself, or with better success, in rendering the decorous pride and natural grace of honourable aristocracy.

Vandyke is, however, inferior to Titian and Velasquez, in that his effort to show this noblesse of air and persons may always be detected; also the aristocracy of Vandyke's day were already so far fearful of their own position as to feel anxiety that it should be immediately recognized. And the effect of the painter's conscious deference, and of the

* Delivered at Oxford, March 15th, 1873.

[1] [See below, § 35, p. 41.]
[2] [No. 117 in that Exhibition. Portrait group of Lord John and Lord Bernard Stuart; exhibited again (by the Earl of Darnley) at the Academy in 1900 (No. 54).]

equally conscious pride of the boys, as they stood to be painted, has been somewhat to shorten the power of the one, and to abase the dignity of the other. And thus, in the midst of my admiration of the youths' beautiful faces, and natural quality of majesty, set off by all splendours of dress and courtesies of art, I could not forbear questioning with myself what the true value was, in the scales of creation, of these fair human beings who set so high a value on themselves; and,—as if the only answer,—the words kept repeating themselves in my ear, "Ye are of more value than many sparrows."[1]

2. Passeres, *στρουθοί*,—the things that open their wings,[2] and are not otherwise noticeable; small birds of the land and wood; the food of the serpent, of man, or of the stronger creatures of their own kind,—that even these, though among the simplest and obscurest of beings, have yet price in the eyes of their Maker, and that the death of one of them cannot take place but by His permission, has long been the subject of declamation in our pulpits, and the ground of much sentiment in nursery education. But the declamation is so aimless, and the sentiment so hollow, that, practically, the chief interest of the leisure of mankind has been found in the destruction of the creatures which they professed to believe even the Most High would not see perish without pity; and, in recent days, it is fast becoming the only definition of aristocracy, that the principal business of its life is the killing of sparrows.

Sparrows, or pigeons, or partridges, what does it matter? "Centum mille perdrices plumbo confecit;" * that is, indeed,

* The epitaph on Count Zachdarm, in *Sartor Resartus*.[3]

---

[1] [Matthew x. 29, 31.]

[2] [*Passer*, for *panser*, from *pando*; *στρουθός*, possibly from *στορέννυμι*, to spread out.]

[3] [Quoted from memory from the end of book ii. chapter iv. ("quinquies mille," etc.).]

too often the sum of the life of an English lord; much questionable now, if *indeed* of more value than that of many sparrows.

8. Is it not a strange fact,[1] that, interested in nothing so much for the last two hundred years, as in his horses, he yet left it to the farmers of Scotland to relieve draught horses from the bearing-rein?* is it not one equally strange that, master of the forests of England for a thousand years, and of its libraries for three hundred, he left the natural history of birds to be written by a card-printer's lad of Newcastle?† Written, and not written, for indeed we have no natural history of birds written yet. It cannot be written but by a scholar and a gentleman; and no English gentleman in recent times has ever thought of birds except as flying targets, or flavourous dishes. The only piece of natural history worth the name in the English language, that I know of, is in the few lines of Milton on the Creation.[2] The only example of a proper manner of contribution to natural history is in White's *Letters from Selborne.* You know I have always spoken of Bewick as pre-eminently a vulgar or boorish person, though of splendid honour and genius;[3] his

* Sir Arthur Helps. *Animals and their Masters*, p. 67.
† *Ariadne Florentina*, § 101 [Vol. XXII. p. 362].

---

[1] [The MS. draft has an additional passage here:—
"I have several times told you it gives me trouble to write or speak; —that I don't do either gushingly or with liberty. Still I am not often actually at a loss for words; but only, of two words I doubt which is the clearest, or, of many words which should come first, and so on. But to-day I am actually at a loss for words; and, what is worse, were I to look through all my dictionaries, I could not find them. For there are no words in any language, living or dead, which are bitter enough to speak the guilt, or scornful enough to express the shame . . ."
And then follow the criticisms of "an English lord," much as in the text.]

[2] [*Paradise Lost*, book vii. Lines from the book, describing the creation of birds, etc., are quoted in Vol. XVII. p. 249 (compare below, p. 50; and lines, describing the creation of plants, in *Proserpina* (see below, p. 365).]

[3] [See *Aratra Pentelici*, § 210 (Vol. XX. p. 355), and *Ariadne Florentina*, § 101 (Vol. XXII. p. 362).]

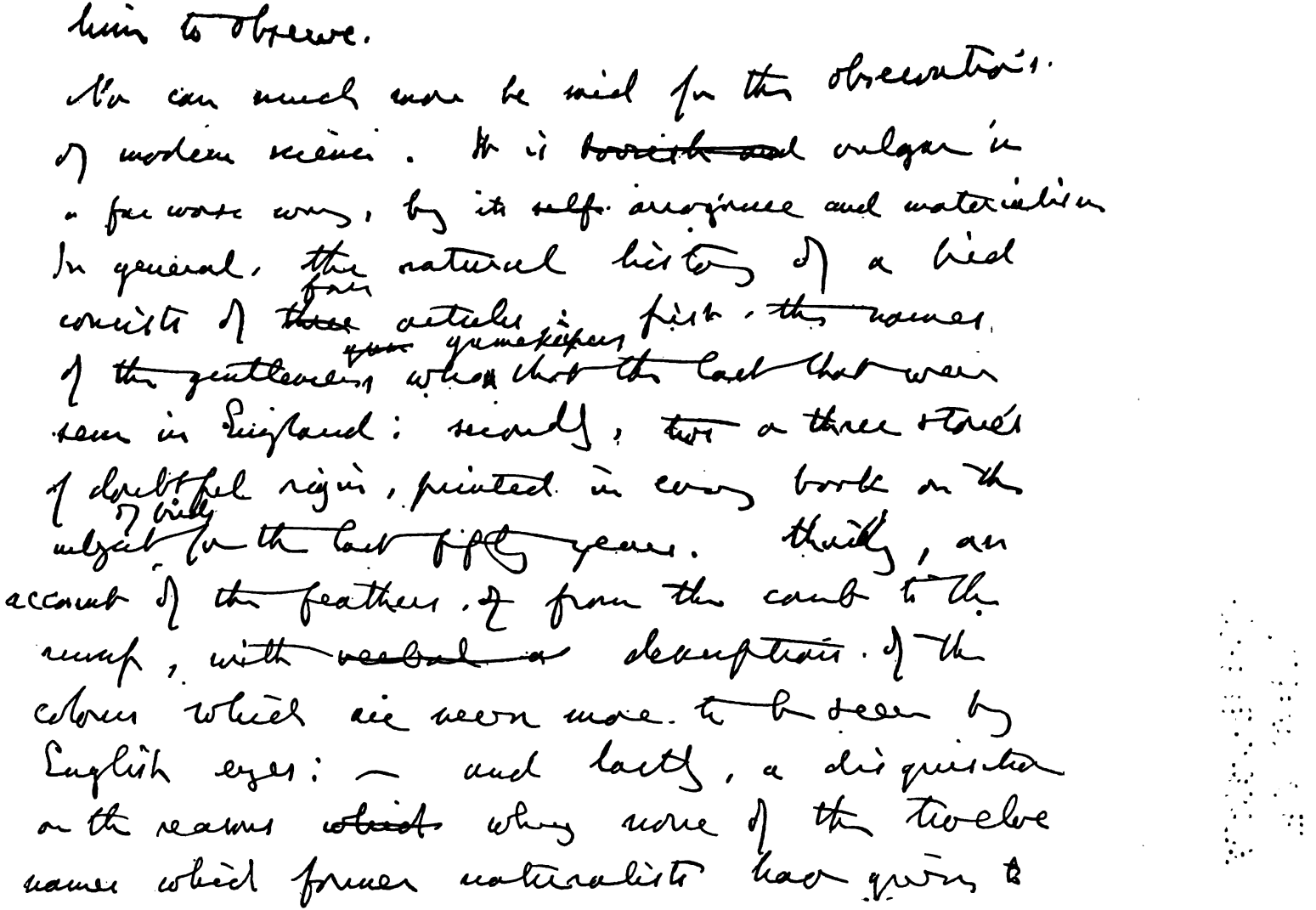
vulgarity shows in nothing so much as in the poverty of the details he has collected, with the best intentions, and the shrewdest sense, for English ornithology. His imagination is not cultivated enough to enable him to choose, or arrange.

4. Nor can much more be said for the observations of modern science. It is vulgar in a far worse way, by its arrogance and materialism. In general, the scientific natural history of a bird consists of four articles,—first, the name and estate of the gentleman whose gamekeeper shot the last that was seen in England; secondly, two or three stories of doubtful origin, printed in every book on the subject of birds for the last fifty years; thirdly, an account of the feathers, from the comb to the rump, with enumeration of the colours which are never more to be seen on the living bird by English eyes; and, lastly, a discussion of the reasons why none of the twelve names which former naturalists have given to the bird are of any further use, and why the present author has given it a thirteenth, which is to be universally, and to the end of time, accepted.

5. You may fancy this is caricature; but the abyss of confusion produced by modern science in nomenclature, and the utter void of the abyss when you plunge into it after any one useful fact, surpass all caricature. I have in my hand thirteen plates of thirteen species of eagles; eagles all, or hawks all, or falcons all—whichever name you choose for the great race of the hook-headed birds of prey—some so like that you can't tell the one from the other, at the distance at which I show them to you, all absolutely alike in their eagle or falcon character, having, every one, the falx for its beak, and every one, flesh for its prey. Do you suppose the unhappy student is to be allowed to call them all eagles, or all falcons, to begin with, as would be the first condition of a wise nomenclature, establishing resemblance by specific name, before marking variation by individual name? No such luck. I hold you up the plates

Lect 1. Robin

no natural history of birds written yet. It cannot be written, but by a gentleman and no gentleman yet has ever thought of birds except as ~~pain~~ flying targets or flavourous dishes. The only bit of natural history worth the name in the English language, that I know of, — is in the few lines of Milton ~~about~~ on the creation. the only example of a proper manner of contribution to natural history is in White's letters from ~~Selbo~~ Selborne. You know I have always spoken of Bewick as preeminently a vulgar or boorish person, though of splendid honour & genius; — his vulgarity shows in ~~their deadliest~~ wonderfully as in the poverty of the details he has collected, with the best intentions and the shrewdest sense — for English ornithology.



him to observe.

No can much more be said for the observations of modern science. It is ~~boorish and~~ vulgar in a far worse way, by its ~~self~~ arrogance and materialism. In general, the natural history of a bird consists of ~~three~~ four articles: first, the names of the gentlemen, ~~gam~~ gamekeepers, who ~~that the last that were~~ seen in England: secondly, two or three stories of doubtful origin, printed in every book on the subject of birds for the last fifty years. thirdly, an account of the feathers, of from the comb to the rump, with ~~verbal a~~ descriptions of the colours which are never more to be seen by English eyes: — and lastly, a disquisition on the reasons ~~which~~ why none of the twelve names which former naturalists have given to

A PAGE OF THE MS. OF "LOVE'S MEINIE" (§§ 3, 4)

of the thirteen birds one by one, and read you their names off the back:—

| | |
|---|---|
| The first, | is an Aquila. |
| The second, | a Haliætus. |
| The third, | a Milvus. |
| The fourth, | a Pandion. |
| The fifth, | an Astur. |
| The sixth, | a Falco. |
| The seventh, | a Pernis. |
| The eighth, | a Circus. |
| The ninth, | a Buteo. |
| The tenth, | an Archibuteo. |
| The eleventh, | an Accipiter. |
| The twelfth, | an Erythropus. |
| And the thirteenth, | a Tinnunculus. |

There's a nice little lesson to entertain a parish schoolboy with, beginning his natural history of birds!

6. There are not so many varieties of robin as of hawk, but the scientific classifiers are not to be beaten. If they cannot find a number of similar birds to give different names to, they will give two names to the same one. Here are two pictures of your own redbreast, out of the two best modern works on ornithology. In one, it is called "Motacilla rubecula"; in the other, "Rubecula familiaris."[1]

7. It is indeed one of the most serious, as one of the most absurd, weaknesses, of modern naturalists to imagine that *any* presently invented nomenclature can stand, even were it adopted by the consent of nations, instead of the conceit of individuals. It will take fifty years' digestion before the recently ascertained elements of natural science can permit the arrangement of species in any permanently (even over a limited period) nameable order; nor then, unless a great man is born to perceive and exhibit such

[1] [See the particulars given in § 141 (below, p. 134).]

order. In the meantime, the simplest and most descriptive nomenclature is the best. Every one of these birds, for instance, might be called falco in Latin, hawk in English, some word being added to distinguish the genus, which should describe its principal aspect or habit. Falco montium, Mountain Hawk; Falco silvarum, Wood Hawk; Falco procellarum, Sea Hawk; and the like. Then, one descriptive epithet would mark species. Falco montium, aureus, Golden Eagle; Falco silvarum, apivorus, Honey Buzzard; and so on; and the naturalists of Vienna, Paris, and London should confirm the names of known creatures, in conclave, once every half-century, and let them so stand for the next fifty years.

8. In the meantime, you yourselves, or, to speak more generally, the young rising scholars of England,—all of you who care for life as well as literature, and for spirit,—even the poor souls of birds,—as well as lettering of their classes in books,—you, with all care, should cherish the old Saxon-English and Norman-French names of birds, and ascertain them with the most affectionate research—never despising even the rudest or most provincial forms: all of them will, some day or other, give you clue to historical points of interest. Take, for example, the common English name of this low-flying falcon, the most tameable and affectionate of his tribe, and therefore, I suppose, fastest vanishing from field and wood, the buzzard. That name comes from the Latin "buteo," still retained by the ornithologists; but, in its original form, valueless, to you. But when you get it comfortably corrupted into Provençal "Busac," (whence gradually the French busard, and our buzzard), you get from it the delightful compound "busacador," "adorer of buzzards"—meaning, generally, a sporting person; and then you have Dante's Bertrand de Born,[1] the first troubadour of war, bearing witness to you how the love of mere hunting and falconry was already, in his day, degrading the

[1] [See *Inferno*, xxviii. *ad fin.*, and xxix. *ad init.*]

military classes, and, so far from being a necessary adjunct of the noble disposition of lover or soldier, was, even to contempt, showing itself separate from both.

"Le ric home, cassador,
M'enneion, e'l buzacador.
Parlan de volada, d'austor,
Ne jamais, d'armas, ni d'amor."[1]

"The rich man, the chaser,
Tires me to death; and the adorer of buzzards.
They talk of covey and hawk,
And never of arms, nor of love."

"Cassador," of course, afterwards becomes "chasseur," and "austor" "vautour." But after you have read this, and familiarized your ear with the old word, how differently Milton's phrase will ring to you,—"Those who thought no better of the Living God than of a buzzard idol,"[2]—and how literal it becomes, when we think of the actual difference between a member of Parliament in Milton's time, and the Busacador of to-day;—and all this freshness and value in the reading, observe, come of your keeping the word which great men have used for the bird, instead of letting the anatomists blunder out a new one from their Latin dictionaries.

9. There are not so many nameable varieties, I just now said, of robin as of falcon; but this is somewhat inaccurately stated. Those thirteen birds represented a very large proportion of the entire group of the birds of prey, which in my sevenfold classification[3] I recommended you to call universally, "hawks." The robin is only one of the far greater multitude of small birds which live almost indiscriminately on grain or insects, and which I

[1] [See *Poésies Complètes de Bertran de Born* (in the *Bibliothèque Meridionale*, Tome I., 1888, p. 105).]

[2] [*Eikonoclastes:* see p. 280 of vol. i. of his *Works* (1847 edition).]

[3] [See *Eagle's Nest*, § 188 (Vol. XXII. p. 249), the classification being "Hawks, parrots, pies, sparrows, pheasants, gulls, and herons."]

recommended you to call generally "sparrows";[1] but of the robin itself, there are two important European varieties —one red-breasted, and the other blue-breasted.

10. You probably, some of you, never heard of the blue-breast; very few, certainly, have seen one alive, and, if alive, certainly not wild in England.

Here is a picture of it, daintily done,* and you can see the pretty blue shield on its breast, perhaps, at this distance. Vain shield, if ever the fair little thing is wretched enough to set foot on English ground! I find the last that was seen was shot at Margate so long ago as 1842,—and there seems to be no official record of any visit before that, since Mr. Thomas Embledon shot one on Newcastle town moor in 1816.[2] But this rarity of visit to us is strange; other birds have no such clear objection to being shot, and really seem to come to England expressly for the purpose. And yet this blue-bird—(one can't say

* Mr. Gould's, in his *Birds of Great Britain*.[3]

---

[1] [The MS. draft has an additional passage on "the Robin as the chief English representative of the whole species of the *στρουθός*":—

"You have large eagles and small, large owls and small; but not large robins and small. 'Well, but,' you say, 'there are different species of owls and eagles, but not different species of robins.' Yes; that is just the point; how little Nature has varied on this theme of the robin, how much on owl and eagle; what a specialty of perfection she seems to consider herself as having reached in a robin. Observe also that in this invariable size it is the best representative, as I have just said, of the essential *στρουθός*,—the land bird, or sparrow species. The *στρουθός* is the Bird central or absolute, in this point of size as in all others. You call a humming-bird a small bird; a crow, or a pheasant, a large bird; the *στρουθός* is just of what we feel to be a natural bird's size. This natural size, it seems, is not merely that to which we are accustomed, but that which has convenient relation to a bird's general functions. They are not usually intended to carry men on their backs, therefore they are not usually as large as ostriches; neither to feed on lambs, therefore not usually as large as eagles, nor on honey, therefore not usually as small as bees. They are for the most part meant to feed on fruits or insects, and to penetrate easily among tree branches. Large enough to catch flies and conquer worms; small enough to be concealed among leaves, and at ease between the twigs of a hedge: that is the normal size of a land bird."]

[2] [The date should be 1826. See Gould, vol. ii. No. 49, and for fuller references Yarrell's *History of British Birds*, 4th ed., vol. i. pp. 321–322. The bird is called "Bluethroat" or "Ruticilla Suecica."]

[3] [Vol. ii., No. 49. The pages are not numbered; the reference here (as elsewhere in this volume) is to the number of the *plate* which the letterpress accompanies.]

"blue robin"—I think we shall have to call him "bluet," like the cornflower)—stays in Sweden, where it sings so sweetly that it is called "a hundred tongues."

11. That, then, is the utmost which the lords of land, and masters of science, do for us in their watch upon our feathered suppliants. One kills them, the other writes classifying epitaphs.

We have next to ask what the poets, painters, and monks have done.

The poets—among whom I affectionately and reverently class the sweet singers of the nursery, mothers and nurses—have done much; very nearly all that I care for your thinking of. The painters and monks, the one being so greatly under the influence of the other, we may for the present class together; and may almost sum their contributions to ornithology in saying that they have plucked the wings from birds, to make angels of men, and the claws from birds, to make devils of men.

If you were to take away from religious art these two great helps of its—I must say, on the whole, very feeble—imagination; if you were to take from it, I say, the power of putting wings on shoulders, and claws on fingers and toes, how wonderfully the sphere of its angelic and diabolic characters would be contracted! Reduced only to the sources of expression in face or movements, you might still find in good early sculpture very sufficient devils; but the best angels would resolve themselves, I think, into little more than, and not often into so much as, the likenesses of pretty women, with that grave and (I do not say it ironically) majestic expression which they put on, when, being very fond of their husbands and children, they seriously think either the one or the other have misbehaved themselves.

12. And it is not a little discouraging for me, and may well make you doubtful of my right judgment in this endeavour to lead you into closer attention to the bird, with its wings and claws still in its own possession;—it is

discouraging, I say, to observe that the beginning of such more faithful and accurate observation in former art, is exactly coeval with the commencement of its decline. The feverish and ungraceful natural history of Paul, called, "of the birds," Paolo degli Uccelli, produced, indeed, no harmful result on the minds of his contemporaries, they watched in him, with only contemptuous admiration, the fantasy of zoological instinct which filled his house with painted dogs, cats, and birds, because he was too poor to fill it with real ones.[1] Their judgment of this morbidly naturalistic art was conclusively expressed by the sentence of Donatello, when going one morning into the Old Market, to buy fruit, and finding the animal-painter uncovering a picture, which had cost him months of care (curiously symbolic in its subject, the infidelity of St. Thomas, of the investigatory fingering of the natural historian), "Paul, my friend," said Donatello, "thou art uncovering the picture just when thou shouldst be shutting it up."[2]

18. No harm, therefore, I repeat, but, on the contrary, some wholesome stimulus to the fancy of men like Luca and Donatello themselves, came of the grotesque and impertinent zoology of Uccello.

But the fatallest institutor of proud modern anatomical and scientific art, and of all that has polluted the dignity, and darkened the charity, of the greater ages, was Antonio Pollajuolo of Florence.[3] Antonio (that is to say) the Poulterer—so named from the trade of his grandfather, and with just so much of his grandfather's trade left in his own disposition, that being set by Lorenzo Ghiberti to complete one of the ornamental festoons of the gates of the Florentine

[1] ["He represented various animals, which he greatly delighted in, and to the delineation of which he gave his most unwearied attention. He had numbers of painted birds, cats, and dogs in his house, with every other animal of which he could get the portrait, being too poor to keep the living creatures; and as he preferred birds to all other animals, he received the name of Paul of the Birds" (Vasari, vol. i. p. 353, Bohn). For other references to the painter, see Vol. VII. pp. 18, 368; Vol. XI. p. 71 *n.*; and Vol. XXIII. p. lxiii.]

[2] [See Vasari, vol. i. p. 360 (Bohn).]

[3] [Compare *Ariadne Florentina*, § 253 (Vol. XXII. p. 481).]

Baptistery, there (says Vasari) "Antonio produced a quail, which may still be seen, and is so beautiful, nay, so perfect, that it wants nothing but the power of flight."[1]

14. Here, the morbid tendency was as attractive as it was subtle. Ghiberti himself fell under the influence of it; allowed the borders of his gates, with their fluttering birds and bossy fruits, to dispute the spectators' favour with the religious subjects they enclosed;[2] and, from that day forward, minuteness and muscularity were, with curious harmony of evil, delighted in together; and the lancet and the microscope, in the hands of fools, were supposed to be complete substitutes for imagination in the souls of wise men: so that even the best artists are gradually compelled, or beguiled, into compliance with the curiosity of their day; and Francia, in the city of Bologna, is held to be a "kind of god, more particularly" (again I quote Vasari) "after he had painted a set of caparisons for the Duke of Urbino, on which he depicted a great forest all on fire, and whence there rushes forth an immense number of every kind of animal, with several human figures. This terrific, yet truly beautiful representation, was all the more highly esteemed for the time that had been expended on it in the plumage of the birds, and other minutiæ in the delineation of the different animals, and in the diversity of the branches and leaves of the various trees seen therein;"[3] and thenceforward the catastrophe is direct, to the ornithological museums which Breughel painted for gardens of Eden,[4] and to the still-life and dead game of Dutch celebrities.

15. And yet I am going to invite you to-day to examine, down to almost microscopic detail, the aspect of a small bird, and to invite you to do this, as a most expedient and sure step in your study of the greatest art.

But the difference in our motive of examination will

[1] [Vol. ii. p. 221 (Bohn).]
[2] [For other references to Ghiberti's Gates of the Baptistery at Florence, see Vol. XXIII. p. 237 *n.*]
[3] [Vol. ii. p. 302 (Bohn).]
[4] [As in his picture of "Paradise," now in the Berlin Museum.]

entirely alter the result. To paint birds that we may show how minutely we can paint, is among the most contemptible occupations of art. To paint them, that we may show how beautiful they are, is not indeed one of its highest, but quite one of its pleasantest and most useful; it is a skill within the reach of every student of average capacity, and which, so far as acquired, will assuredly both make their hearts kinder, and their lives happier.

Without further preamble, I will ask you to look to-day, more carefully than usual, at your well-known favourite, and to think about him with some precision.

16. And first, Where does he come from? I stated that my lectures were to be on English and Greek birds;[1] but we are apt to fancy the robin all our own. How exclusively, do you suppose, he really belongs to us? You would think this was the first point to be settled in any book about him. I have hunted all my books through, and can't tell you how much he is our own, or how far he is a traveller.

And, indeed, are not all our ideas obscure about migration itself? You are broadly told that a bird travels, and how wonderful it is that it finds its way; but you are scarcely ever told, or led to think, what it really travels for—whether for food, for warmth, or for seclusion—and how the travelling is connected with its fixed home. Birds have not their town and country houses,—their villas in Italy, and shooting boxes in Scotland. The country in which they build their nests is their proper home,—the country, that is to say, in which they pass the spring and summer. Then they go south in the winter, for food and warmth; but in what lines, and by what stages? The general definition of a migrant in this hemisphere is a bird that goes north to build its nest, and south for the winter; but, then, the one essential point to know about it is the breadth and latitude of the zone it properly inhabits,—that

[1] [See the announcement in the *University Gazette* (above, p. 5).]

is to say, in which it builds its nest; next, its habits of life, and extent and line of southing in the winter; and finally, its manner of travelling.

17. Now, here is this entirely familiar bird, the robin. Quite the first thing that strikes me about it, looking at it as a painter, is the small effect it seems to have had on the minds of the southern nations. I trace nothing of it definitely, either in the art or literature of Greece or Italy. I find, even, no definite name for it; you don't know if Lesbia's "passer"[1] had a red breast, or a blue, or a brown. And yet Mr. Gould says it is abundant in all parts of Europe, in all the islands of the Mediterranean, and in Madeira and the Azores. And then he says—(now notice the puzzle of this),—"In many parts of the Continent it is a migrant, and, contrary to what obtains with us, is there treated as a vagrant, for there is scarcely a country across the water in which it is not shot down and eaten."[2]

"In many parts of the Continent it is a migrant." In what parts—how far—in what manner?

18. In none of the old natural history books can I find any account of the robin as a traveller, but there is, for once, some sufficient reason for their reticence. He has a curious fancy in his manner of travelling. Of all birds, you would think he was likely to do it in the cheerfullest way, and he does it in the saddest. Do you chance to have read, in the *Life of Charles Dickens*, how fond he was of taking long walks in the night and alone?[3] The robin, en voyage, is the Charles Dickens of birds. He always travels in the night, and alone; rests, in the day, wherever day chances to find him; sings a little, and pretends he hasn't been anywhere. He goes as far, in the winter, as the north-west of Africa; and in Lombardy, arrives from the south early in March; but does not stay long, going

[1] [Catullus: *Ode*, ii.]
[2] [*Birds of Great Britain*, vol. ii., No. 49.]
[3] [See *The Life of Charles Dickens*, by John Forster, 1874, vol. iii. p. 221.]

on into the Alps, where he prefers wooded and wild districts. So, at least, says my Lombard informant.[1]

I do not find him named in the list of Cretan birds;[2] but even if often seen, his dim red breast was little likely to make much impression on the Greeks, who knew the flamingo, and had made it, under the name of Phœnix or Phœnicopterus, the centre of their myths of scarlet birds. They broadly embraced the general aspect of the smaller and more obscure species, under the term ξουθὸς, which, as I understand their use of it, exactly implies the indescribable silky brown, the groundwork of all other colour in so many small birds, which is indistinct among green leaves, and absolutely identifies itself with dead ones, or with mossy stems.

19. I think I show it you more accurately in the robin's back than I could in any other bird; its mode of transition into more brilliant colour is, in him, elementarily simple; and although there is nothing, or rather because there is nothing, in his plumage, of interest like that of tropical birds, or even of our own game-birds, I think it will be desirable for you to learn first from the breast of the robin what a feather is. Once knowing that, thoroughly, we can further learn from the swallow what a wing is; from the chough what a beak is; and from the falcon what a claw is.

I must take care, however, in neither of these last two particulars, to do injustice to our little English friend here; and before we come to his feathers, must ask you to look at his bill and his feet.

20. I do not think it is distinctly enough felt by us that the beak of a bird is not only its mouth, but its hand, or rather its two hands. For, as its arms and hands are turned into wings, all it has to depend upon, in

[1] [*Storia Naturale degli Uccelli che nidificano in Lombardia scritta da Eugenio Bettoni con tavole da O. Dressler:* Milano, 1865, vol. i. tav. 109. Ruskin afterwards presented his copy of this book to Whitelands College.]

[2] ["List of the Birds of the Islands of Crete," 1843, by H. M. Drummond, in *The Annals and Magazine of Natural History*, 1843, vol. xii. pp. 423 *seq.*]

economical and practical life, is its beak. The beak, therefore, is at once its sword, its carpenter's tool-box, and its dressing-case; partly also its musical instrument; all this besides its function of seizing and preparing the food, in which functions alone it has to be a trap, carving-knife, and teeth, all in one.

21. It is this need of the beak's being a mechanical tool which chiefly regulates the form of a bird's face, as opposed to a four-footed animal's. If the question of food were the only one, we might wonder why there were not more four-footed creatures living on seeds than there are; or why those that do—field-mice and the like—have not beaks instead of teeth. But the fact is that a bird's beak is by no means a perfect eating or food-seizing instrument. A squirrel is far more dexterous with a nut than a cockatoo; and a dog manages a bone incomparably better than an eagle.[1] But the beak has to do so much more! Pruning feathers, building nests, and the incessant discipline in military arts, are all to be thought of, as much as feeding.

Soldiership, especially, is a much more imperious necessity among birds than quadrupeds. Neither lions nor wolves habitually use claws or teeth in contest with their own species; but birds, for their partners, their nests, their hunting-grounds, and their personal dignity, are nearly always in contention; their courage is unequalled by that of any other race of animals capable of comprehending danger; and their pertinacity and endurance have, in all ages, made them an example to the brave, and an amusement to the base, among mankind.

22. Nevertheless, since as sword, as trowel, or as pocket-comb, the beak of the bird has to be pointed, the collection of seeds may be conveniently entrusted to this otherwise penetrative instrument, and such food as can only be obtained by probing crevices, splitting open fissures, or neatly

[1] [Compare the lecture on "The Eagle of Elis," § 12 (Vol. XX. p. 401).]

and minutely picking things up, is allotted, pre-eminently, to the bird species.

The food of the robin, as you know, is very miscellaneous. Linnæus says of the Swedish one, that it is "delectatus euonymi baccis,"[1]—"delighted with dogwood berries,"—the dogwood growing abundantly in Sweden, as once in Forfarshire, where it grew, though only a bush usually in the south, with trunks a foot or eighteen inches in diameter, and the tree thirty feet high. But the Swedish robin's taste for its berries is to be noted by you, because, first, the dogwood berry is commonly said to be so bitter that it is not eaten by birds (Loudon, *Arboretum*, ii., 497[2]); and, secondly, because it is a pretty coincidence that this most familiar of household birds should feed fondly from the tree which gives the housewife her spindle,—the proper name of the dogwood in English, French, and German being alike "Spindle-tree." It feeds, however, with us, certainly, most on worms and insects. I am not sure how far the following account of its mode of dressing its dinners may be depended on: I take it from an old book on Natural History, but find it, more or less, confirmed by others: "It takes a worm by one extremity in its beak, and beats it on the ground till the inner part comes away. Then seizing it in a similar manner by the other end, it entirely cleanses the outer part, which alone it eats."[3]

One's first impression is that this must be a singularly unpleasant operation for the worm, however fastidiously delicate and exemplary in the robin. But I suppose the real meaning is, that as a worm lives by passing earth through its body, the robin merely compels it to quit this —not ill-gotten, indeed, but now quite unnecessary—wealth. We human creatures, who have lived the lives of worms,

[1] [*Caroli Linnæi Fauna Suecica*, Stockholm, 1761, p. 95.]
[2] [*Arboretum et Fruticetum Britannicum*, by J. C. Loudon, 1838.]
[3] [*Animal Biography; or, Popular Zoology illustrated by Authentic Anecdotes*, by the Rev. W. Bingley, 5th ed., 1820, vol. ii. p. 341. Ruskin refers again to this book in *Fors Clavigera*, Letters 51, § 11, and 52, § 15.]

collecting dust, are served by Death in exactly the same manner.

23. You will find that the robin's beak, then, is a very prettily representative one of general bird power. As a weapon, it is very formidable indeed; he can kill an adversary of his own kind with one blow of it in the throat; and is so pugnacious, "valde pugnax," says Linnæus, "ut non una arbor duos capiat erithacos,"[1]—"no single tree can hold two cock-robins;" and for precision of seizure, the little flat hook at the end of the upper mandible is one of the most delicately formed points of forceps which you can find among the grain eaters. But I pass to one of his more special perfections.

24. He is very notable in the exquisite silence and precision of his movements, as opposed to birds who either creak in flying, or waddle in walking. "Always quiet," says Gould, "for the silkiness of his plumage renders his movements noiseless, and the rustling of his wings is never heard, any more than his tread on earth, over which he bounds with amazing sprightliness."[2] You know how much importance I have always given, among the fine arts, to good dancing.[3] If you think of it, you will find one of the robin's very chief ingratiatory faculties is his dainty and delicate movement,—his footing it featly here and there. Whatever prettiness there may be in his red breast, at his brightest he can always be outshone by a brickbat.[4] But if he is rationally proud of anything about him, I should think a robin must be proud of his legs. Hundreds of birds have longer and more imposing ones—but for real neatness, finish, and precision of action, commend me to his fine little ankles, and fine little feet; this long stilted process, as you know, corresponding to our ankle-bone. Commend me, I say, to the robin for use of his ankles—he is, of all birds, the

[1] [See *Fauna Suecica*, p. 95.]
[2] [Vol. ii., No. 48.]
[3] [See, for instance, *Eagle's Nest*, § 13 (Vol. XXII. p. 132).]
[4] [Compare below, § 33, p. 38.]

pre-eminent and characteristic Hopper; none other so light, so pert, or so swift.

25. We must not, however, give too much credit to his legs in this matter. A robin's hop is half a flight; he hops, very essentially, with wings and tail, as well as with his feet, and the exquisitely rapid opening and quivering of the tail-feathers certainly give half the force to his leap. It is in this action that he is put among the motacillae, or wagtails; but the ornithologists have no real business to put him among them. The swing of the long tail feathers in the true wagtail is entirely consequent on its motion, not impulsive of it—the tremulous shake is *after* alighting. But the robin leaps with wing, tail, and foot, all in time, and all helping each other. Leaps, I say; and you check at the word; and ought to check: you look at a bird hopping, and the motion is so much a matter of course, you never think how it is done. But do you think you would find it easy to hop like a robin if you had two—all but wooden—legs, like this?

26. I have looked wholly in vain through all my books on birds, to find some account of the muscles it uses in hopping, and of the part of the toes with which the spring is given. I must leave you to find out that for yourselves; it is a little bit of anatomy which I think it highly desirable for you to know, but which it is not my business to teach you.[1] Only observe, this is the point to be made out. You leap yourselves, with the toe and ball of the foot; but, in that power of leaping, you lose the faculty of grasp; on the contrary, with your hands, you grasp as a bird with its feet. But you cannot hop on your hands. A cat, a leopard, and a monkey, leap or grasp with equal ease; but the action of their paws in leaping is, I imagine, from the fleshy ball of the foot; while in the bird, characteristically γαμψῶνυξ,[2] this fleshy ball is reduced to a boss or series of bosses, and the nails are elongated into sickles

[1] [Compare below, § 100, p. 90.]
[2] [See the "Eagle of Elis," § 10 (Vol. XX. p. 401).]

or horns; nor does the springing power seem to depend on the development of the bosses. They are far more developed in an eagle than a robin; but you know how unpardonably and preposterously awkward an eagle is when he hops. When they are most of all developed, the bird walks, runs, and digs well, but leaps badly.

27. I have no time to speak of the various forms of the ankle itself, or of the scales of armour, more apparent than real, by which the foot and ankle are protected. The use of this lecture is not either to describe or to exhibit these varieties to you, but so to awaken your attention to the real points of character, that, when you have a bird's foot to draw, you may do so with intelligence and pleasure, knowing whether you want to express force, grasp, or firm ground pressure, or dexterity and tact in motion. And as the actions of the foot and the hand in man are made by every great painter perfectly expressive of the character of mind, so the expressions of rapacity, cruelty, or force of seizure, in the harpy, the gryphon, and the hooked and clawed evil spirits of early religious art, can only be felt by extreme attention to the original form.

28. And now I return to our main question,[1] for the robin's breast to answer, "What is a feather?" You know something about it already; that it is composed of a quill, with its lateral filaments terminating generally, more or less, in a point; that these extremities of the quills, lying over each other like the tiles of a house, allow the wind and rain to pass over them with the least possible resistance, and form a protection alike from the heat and the cold; which, in structure much resembling the scale-armour assumed by man for very different objects, is, in fact, intermediate, exactly, between the fur of beasts and the scales of fishes; having the minute division of the one, and the armour-like symmetry and succession of the other.

29. Not merely symmetry, observe, but extreme flatness.

[1] [See above, § 19; compare the analysis of feathers in *The Laws of Fésole*, Vol. XV. pp. 397 *seq.*]

Feathers are smoothed down, as a field of corn by wind with rain; only the swathes laid in beautiful order. They are fur, so structurally placed as to imply, and submit to, the perpetually swift forward motion. In fact, I have no doubt the Darwinian theory on the subject is that the feathers of birds once stuck up all erect, like the bristles of a brush, and have only been blown flat by continual flying.

Nay, we might even sufficiently represent the general manner of conclusion in the Darwinian system by the statement that if you fasten a hair-brush to a mill-wheel, with the handle forward, so as to develop itself into a neck by moving always in the same direction, and within continual hearing of a steam-whistle, after a certain number of revolutions the hair-brush will fall in love with the whistle; they will marry, lay an egg, and the produce will be a nightingale.

30. Whether, however, a hog's bristle can turn into a feather or not, it is vital that you should know the present difference between them.

The scientific people will tell you that a feather is composed of three parts—the down, the laminæ, and the shaft.

But the common-sense method of stating the matter is that a feather is composed of two parts, a shaft with lateral filaments. For the greater part of the shaft's length, these filaments are strong and nearly straight, forming, by their attachment, a finely warped sail, like that of a windmill. But towards the root of the feather they suddenly become weak, and confusedly flexible, and form the close down which immediately protects the bird's body.

To show you the typical arrangement of these parts, I choose, as I have said, the robin; because, both in his power of flying, and in his colour, he is a moderate and balanced bird;—not turned into nothing but wings, like a swallow, or nothing but neck and tail, like a peacock. And first for his flying power. There is one of the long

feathers of robin's wing, and here (Fig. 1) the analysis of its form.

31. First, in pure outline (A), seen from above, it is very nearly a long oval, but with this peculiarity, that it has, as it were, projecting shoulders at *a* 1 and *a* 2. I merely desire you to observe this, in passing, because one usually thinks of the contour as sweeping unbroken from the root to the point. I have not time to-day to enter on any discussion of the reason for it, which will appear

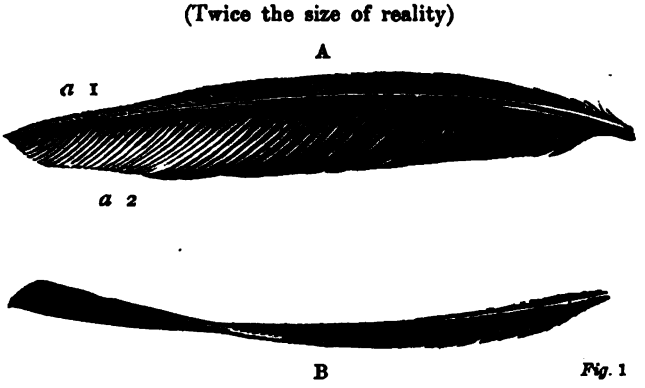


Fig. 1

when we examine the placing of the wing feathers for their stroke.

Now, I hope you are getting accustomed to the general method in which I give you the analysis of all forms—leaf, or feather, or shell, or limb. First, the plan; then the profile; then the cross-section.

I take next, the profile of my feather (B, Fig. 1), and find that it is twisted as the sail of a windmill is, but more distinctly, so that you can always see the upper surface of the feather at its root, and the under at its end. Every primary wing-feather, in the fine flyers, is thus twisted; and is best described as a sail striking with the power of a scymitar, but with the flat instead of the edge.

82. Further, you remember that on the edges of the broad side of feathers you find always a series of undulations, irregularly sequent, and lapping over each other like waves on sand. You might at first imagine that this appearance was owing to a slight ruffling or disorder of the filaments; but it is entirely normal, and, I doubt not, so constructed, in order to ensure a redundance of material in the plume, so that no accident or pressure from wind may leave a gap anywhere. How this redundance is obtained you will see in a moment by bending any feather the

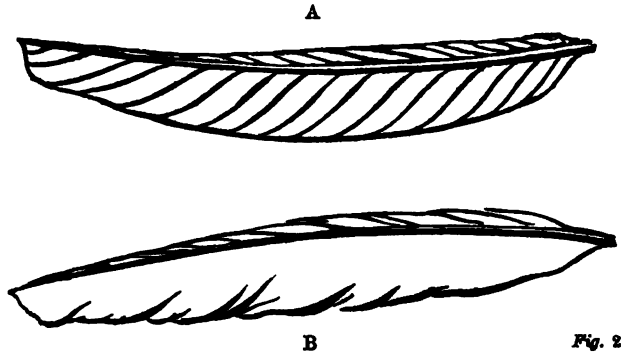



*Fig.* 2

wrong way. Bend, for instance, this plume, B, Fig. 2, into the reversed curve, A, Fig. 2; then all the filaments of the plume become perfectly even, and there are no waves at the edge.[1] But let the plume return into its proper form, B, and the tissue being now contracted into a smaller space, the edge waves are formed in it instantly.

Hitherto, I have been speaking only of the filaments arranged for the strength and continuity of the energetic plume; they are entirely different when they are set together for decoration instead of force. After the feather of the robin's wing, let us examine one from his breast.

83. I said, just now [§ 24], he might be at once outshone by a brickbat. Indeed, the day before yesterday, sleeping at

[1] [For this point compare *Laws of Fésole*, Vol. XV. p. 402.]

ARCHIVES

**PEACOCK'S FEATHER**
**with enlarged filaments**

Allen & Co. Sc.

Lichfield, and seeing, the first thing when I woke in the morning (for I never put down the blinds of my bedroom windows), the not uncommon sight in an English country town of an entire house-front of very neat, and very flat, and very red bricks, with very exactly squared square windows in it; and not feeling myself in anywise gratified or improved by the spectacle, I was thinking how in this, as in all other good, the too much destroyed all. The breadth of a robin's breast in brick-red is delicious, but a whole house-front of brick-red as vivid, is alarming. And yet one cannot generalize even that trite moral with any safety—for infinite breadth of green is delightful, however green; and of sea or sky, however blue.

You must note, however, that the robin's charm is greatly helped by the pretty space of grey plumage which separates the red from the brown back, and sets it off to its best advantage. There is no great brilliancy in it, even so relieved; only the finish of it is exquisite.

84. If you separate a single feather, you will find it more like a transparent hollow shell than a feather (so delicately rounded the surface of it),—grey at the root, where the down is,—tinged, and only tinged, with red at the part that overlaps and is visible; so that, when three or four more feathers have overlapped it again, all together, with their joined red, are just enough to give the colour determined upon, each of them contributing a tinge. There are about thirty of these glowing filaments on each side (the whole being no larger across than a well-grown currant), and each of these is itself another exquisite feather, with central quill and lateral webs, whose filaments are not to be counted.

The extremity of these breast plumes parts slightly into two, as you see in the peacock's, and many other such decorative ones. The transition from the entirely leaf-like shape of the active plume, with its oblique point, to the more or less symmetrical dualism of the decorative plume, corresponds with the change from the pointed green leaf to

the dual, or heart-shaped, petal of many flowers. I shall return to this part of our subject, having given you, I believe, enough of detail for the present.

35. I have said nothing to-day of the mythology of the bird, though I told you[1] that would always be, for us, the most important part of its natural history. But I am obliged, sometimes, to take what we immediately want, rather than what, ultimately, we shall need chiefly. In the second place, you probably, most of you, know more of the mythology of the robin than I do, for the stories about it are all northern, and I know scarcely any myths but the Italian and Greek. You will find under the name "Robin," in Miss Yonge's exhaustive and admirable *History of Christian Names*,[2] the various titles of honour and endearment connected with him, and with the general idea of redness,—from the bishop called "Bright Red Fame," who founded the first great Christian church on the Rhine (I am afraid of your thinking I mean a pun, in connection with robins, if I tell you the locality of it),[3] down through the Hoods, and Roys, and Grays, to Robin Goodfellow, and Spenser's "Hobbinol,"[4] and our modern "Hob,"—joining on to the "goblin" which comes from the old Greek Κόβαλος. But I cannot let you go without asking you to compare the English and French feeling about small birds, in Chaucer's time, with our own on the same subject. I say English and French, because the original French of the *Romance of the Rose* shows more affection for birds than even Chaucer's translation, passionate as he is, always, in love for any one of his little winged brothers or sisters.[5] Look, however, either in the French or English at the description of the coming of the God of Love, leading his carol-dance, in the garden of the Rose.

[1] [In the lecture on "The Halcyon": *Eagle's Nest*, § 180 (Vol. XXII. p. 245).]
[2] [See pp. 391–392 in the new and revised edition of 1884.]
[3] [Bishop Hruadperaht (or bright fame) Rupert, founder, about 700 A.D., of the first cathedral of Worms.]
[4] [In *The Shepheards Calender* (April).]
[5] [For other references to the birds of Chaucer, see *Munera Pulveris*, Vol. XVII. p. 273 *n.*]

His dress is embroidered with figures of flowers and of beasts; but about him fly the *living* birds. The French is:—

"Il etoit tout couvert d'oisiaulx
De rossignols et de papegaux
De calendre, et de mesangel.
Il semblait que ce fut une angle
Qui fuz tout droit venuz du ciel." [1]

**36.** There are several points of philology in this transitional French, and in Chaucer's translation, which it is well worth your patience to observe. The monkish Latin "angelus," you see, is passing through the very unpoetical form "angle," into "ange"; but, in order to get a rhyme with it in that angular form, the French troubadour expands the bird's name, "mesange," quite arbitrarily, into "mesangel." Then Chaucer, not liking the "mes" at the beginning of the word, changes that unscrupulously into "arch"; and gathers in, though too shortly, a lovely bit from another place about the nightingales flying so close round Love's head that they strike some of the leaves off his crown of roses; so that the English runs thus:—

"But nightingales, a full great rout
That flien over his head about,
The leaves felden as they flien
And he was all with birds wrien,
With popinjay, with nightingale,
With chelaundre, and with wodewale,
With finch, with lark, and with archangel.
He seemed as he were an angell,
That down were comen from Heaven clear." [2]

Now, when I first read this bit of Chaucer, without referring to the original, I was greatly delighted to find that there was a bird in his time called an archangel, and set to work, with brightly hopeful industry, to find out what it was. I was a little discomfited by finding that

[1] [Lines 927-931 of the French edition of Orléans, 1878.]
[2] [*The Romaunt of the Rose*, 906.]

in old botany the word only meant "dead-nettle," but was still sanguine about my bird, till I found the French form descend, as you have seen, into a mesangel, and finally into mésange, which is a provincialism from μεῖον, and means, the smallest of birds—or, specially here,—a titmouse.[1] I have seldom had a less expected or more ignominious fall from the clouds.

37. The other birds, named here and in the previous description of the garden, are introduced, as far as I can judge, nearly at random, and with no precision of imagination like that of Aristophanes;[2] but with a sweet childish delight in crowding as many birds as possible into the smallest space. The popinjay is always prominent; and I want some of you to help me (for I have not time at present for the chase) in hunting the parrot down on his first appearance in Europe.[3] Just at this particular time he contested favour even with the falcon; and I think it a piece of good fortune that I chanced to draw for you, thinking only of its brilliant colour, the popinjay, which Carpaccio allows to be present on the grave occasion of St. George's baptizing the princess and her father.[4]

38. And, indeed, as soon as the Christian poets begin to speak of the singing of the birds, they show themselves in quite a different mood from any that ever occurs to a Greek. Aristophanes, with infinitely more skill, describes, and partly imitates, the singing of the nightingale; but simply as beautiful sound. It "fills the thickets with honey";[5] and if in the often-quoted—just because it is *not*

[1] [Littré connects mésange with the German *meise* (titmouse).]

[2] [For other references to the birds of Aristophanes, see below, p. 158; and Vol. VII. p. 338, Vol. XVII. p. 100 *n.*]

[3] [The parrot is first mentioned by Ctesias (about 400 B.C.) in his *Indica* (cap. 3), and next by Aristotle (*Hist. An.*, viii. 12, 13). It was the Indian conquests of Alexander that first introduced the parrot into Europe. African parrots were introduced to Rome by explorers employed by Nero (Pliny, *Nat. Hist.*, vi. 29). Both Ovid and Statius, it will be remembered, have poems on the parrot.]

[4] [See Plate LXII. in Vol. XXIV. (p. 341).]

[5] [*Birds*, 224: κατεμελίτωσε τὴν λόχμην ὅλην. The "partial imitation" of the bird's song is in the metre of the preceding invocation to the nightingale and in the word ἐλελιζομένη. Ruskin refers to the passage again in *Fors Clavigera*, Letter 28, § 13.]

characteristic of Greek literature—passage of the Coloneus,[1] a deeper sentiment is shown, that feeling is dependent on association of the bird-voices with deeply pathetic circumstances. But this troubadour finds his heart in heaven by the power of the singing only:—

"Trop parfoisaient beau servise
Ciz oiselles que je vous devise.
Il chantaient un chant ytel
Com fussent angle esperitel."[2]

We want a moment more of word-chasing to enjoy this. "Oiseau," as you know, comes from "avis"; but it had at this time got "oisel" for its singular number, of which the terminating "sel" confused itself with the "selle," from "ancilla," in domicilla and demoiselle;[3] and the feminine form "oiselle" thus snatched for itself some of the delightfulness belonging to the title of a young lady. Then note that "esperitel" does not here mean merely spiritual (because all angels are spiritual), but an "angle esperitel" is an angel of the air. So that, in English, we could only express the meaning in some such fashion as this:—

"They perfected all their service of love,
These maiden birds that I tell you of.
They sang such a song, so finished-fair,
As if they were angels, born of the air."

89. Such were the fancies, then, and the scenes, in which Englishmen took delight in Chaucer's time. England was then a simple country; we boasted, for the best kind of riches, our birds and trees, and our wives and children. We have now grown to be a rich one; and our first pleasure is in shooting our birds; but it has become too expensive for us to keep our trees. Lord Derby, whose crest is

[1] [Sophocles: *Œdipus Coloneus*, 671 *seq.*, the chorus singing the praises of Colonus, where the nightingale makes her haunt; the passage is referred to also in *Modern Painters*, vol. iii. (Vol. V. p. 273).]

[2] [*Le Roman de Rose*, lines 677–680.]

[3] [Compare below, p. 142.]

the eagle and child—you will find the northern name for it, the bird and bantling, made classical by Scott[1]—is the first to propose that wood-birds should have no more nests. We must cut down all our trees, he says, that we may effectively use the steam-plough; and the effect of the steam-plough, I find by a recent article in the *Cornhill Magazine*,[2] is that an English labourer must not any more have a nest, nor bantlings, neither; but may only expect to get on prosperously in life, if he be perfectly skilful, sober, and honest, and dispenses, at least until he is forty-five, with the "luxury of marriage."

40. Gentlemen, you may perhaps have heard me blamed for making no effort here to teach in the artisan's schools.[3] But I can only say that, since the future life of the English labourer or artisan (summing the benefits to him of recent philosophy and economy) is to be passed in a country without angels and without birds, without prayers and without songs, without trees and without flowers, in a state of exemplary sobriety, and (extending the Catholic celibacy of the clergy into celibacy of the laity) in a state of dispensation with the luxury of marriage, I do not believe he will derive either profit or entertainment from lectures on the Fine Arts.

[1] [*Waverley*, ch. lxxi.: "'a most ancient and distinguished bearing, as well as that of my young friend Francis Stanley, which is the eagle and child.' 'The bird and bantling they call it in Derbyshire, sir,' said Stanley."]

[2] [See two articles on "The Agricultural Labourer" in the numbers for February and March, 1873. The particular passage referred to is as follows: "Unmarried men, day labourers at 12s. a week, and not making more than 16s. the whole year round, are known to save within 25 years as much as £200. An agricultural labourer, from forty to forty-five years of age, of tried skill, probity, and sobriety, with £200 in his pocket is a made man. True, he has had to forego the luxury of marriage" (vol. 27, p. 315). The passage is referred to also in *Fors Clavigera*, Letters 28, 60, and 73.]

[3] [See Vol. XXI. p. 165.]

# LECTURE II*

## THE SWALLOW

41. We are to-day to take note of the form of a creature which gives us a singular example of the unity of what artists call beauty, with the fineness of mechanical structure, often mistaken for it. You cannot but have noticed how little, during the years of my past professorship, I have introduced any questions as to the nature of beauty. I avoided them, partly because they are treated of at length in my books;[1] and partly because they are, in the last degree, unpractical. We are born to like or dislike certain aspects of things; nor could I, by any arguments, alter the defined tastes which you received at your birth, and which the surrounding circumstances of life have enforced, without any possibility of your voluntary resistance to them. And the result of those surrounding circumstances, to-day, is that most English youths would have more pleasure in looking at a locomotive than at a swallow; and that many English philosophers would suppose the pleasure so received to be through a new sense of beauty. But the meaning of the word "beauty" in the fine arts, and in classical literature, is properly restricted to those very qualities in which the locomotion of a swallow differs from that of an engine.

42. Not only from that of an engine; but also from that of animals in whose members the mechanism is so complex as to give them a resemblance to engines. The dart of the common house-fly, for instance, in full strength,

* Delivered at Oxford, May 2nd, 1873.

[1] [See especially vol. ii. of *Modern Painters* (Vol. IV.).]

is a more wonderful movement than that of a swallow. The mechanism of it is not only more minute, but the swiftness of the action so much greater, that the vibration of the wing is invisible. But though a schoolboy might prefer the locomotive to the swallow, he would not carry his admiration of finely mechanical velocity into unqualified sympathy with the workmanship of the God of Ekron;[1] and would generally suppose that flies were made only to be food for the more graceful fly-catcher,—whose finer grace you will discover, upon reflection, to be owing to the very moderation and simplicity of its structure, and to the subduing of that infinitude of joints, claws, tissues, veins, and fibres which inconceivably vibrate in the microscopic* creature's motion, to a quite intelligible and simple balance of rounded body upon edged plume, maintained not without visible, and sometimes fatigued, exertion, and raising the lower creature into fellowship with the volition and the virtue of humanity.

43. With the virtue, I say, in an exceedingly qualified sense; meaning rather the strength and art displayed in overcoming difficulties, than any distinct morality of disposition. The bird has kindly and homely qualities; but its principal "virtue" for *us*, is its being an incarnate voracity, and that it moves as a consuming and cleansing power. You sometimes hear it said of a humane person that they would not kill a fly: from 700 to 1000 flies a day are a moderate allowance for a baby swallow.

44. Perhaps, as I say this, it may occur to some of you to think, for the first time, of the reason of the bird's name. For it is very interesting, as a piece of language study, to consider the different power on our minds,—nay, the different sweetness to the ear,—which, from association,

* I call it so because the members and action of it cannot be seen with the unaided eye.

[1] [For Baal-zebub (=Lord of the fly), the form of Baal worshipped at Ekron (2 Kings i. 2, 3), see Vol. XXII. p. 533.]

these same two syllables receive, when we read them as a noun, or as a verb. Also, the word is a curious instance of the traps which are continually open for rash etymologists. At first, nothing would appear more natural than that the name should have been given to the bird from its reckless function of devouring. But if you look to your Johnson, you will find, to your better satisfaction, that the name means "bird of porticos," or porches, from the Gothic "swale"; "subdivale,"—so that he goes back in thought as far as Virgil's, "Et nunc porticibus vacuis, nunc humida circum stagna, sonat."[1] Notice, in passing, how a simile of Virgil's, or any other great master's, will probably tell in two or more ways at once. Juturna is compared to the swallow, not merely as winding and turning swiftly in her chariot, but as being a water-nymph by birth,—"Stagnis quae fluminibusque sonoris praesidet."[2] How many different creatures in one the swallow is by birth, as a Virgilian simile is many thoughts in one,[3] it would take many more lectures than one to show you clearly; but I will indicate them with such rough sketch as is possible.

45. It belongs, as most of you know, to a family of birds called Fissi-rostres, or, literally, split-beaks. Split heads would be a better term, for it is the enormous width of mouth and power of gaping which the epithet is meant to express. A dull sermon, for instance, makes half the congregation "fissi-rostres." The bird, however, is most vigilant when its mouth is widest, for it opens as a net to catch whatever comes in its way,—hence the French, giving the whole family the more literal name, "Gobble-fly"—Gobe-mouche, extend the term to the open-mouthed and too acceptant appearance of a simpleton.

46. Partly in order to provide for this width of mouth, but more for the advantage in flight, the head of the

[1] [*Æneid*, xii. 476.]
[2] [*Ibid.*, xii. 139.]
[3] [For other references to Virgil, see Vol. XII. p. 103 n.]

swallow is rounded into a bullet shape, and sunk down on the shoulders, with no neck whatever between, so as to give nearly the aspect of a conical rifle bullet to the entire front of the body; and, indeed, the bird moves more like a bullet than an arrow—dependent on a certain impetus of weight rather than on sharp penetration of the air. I say dependent on, but I have not yet been able to trace distinct relation between the shapes of birds and their powers of flight. I suppose the form of the body is first determined by the general habits and food, and that nature can make any form she chooses volatile; only one point I think is always notable, that a complete master of the art of flight must be short-necked, so that he turns altogether, if he turns at all. You don't expect a swallow to look round a corner before he goes round it; he must take his chance. The main point is that he may be able to stop himself, and turn, in a moment.

47. The stopping, on any terms, is difficult enough to understand; nor less so, the original gaining of the pace. We always think of flight as if the main difficulty of it were only in keeping up in the air;—but the buoyancy is conceivable enough, the far more wonderful matter is the getting along. You find it hard work to row yourself at anything like speed, though your impulse-stroke is given in a heavy element, and your return-stroke in a light one. But both in birds and fishes, the impelling stroke and its return are in the same element; and if, for the bird, that medium yields easily to its impulses, it secedes as easily from the blow that gives it. And if you think what an effort you make to leap six feet, with the earth for a fulcrum, the dart either of a trout or a swallow, with no fulcrum but the water and air they penetrate, will seem to you, I think, greatly marvellous. Yet of the mode in which it is accomplished you will as yet find no undisputed account in any book on natural history, and scarcely, as far as I know, definite notice even of the rate of flight. What do you suppose it is? We are apt to think of the

migration of a swallow, as we should ourselves of a serious journey. How long, do you think, it would take him, if he flew uninterruptedly, to get from here to Africa?

48. Michelet gives the rate of his flight (at full speed, of course) as eighty leagues an hour.[1] I find no more sound authority; but do not doubt his approximate accuracy;* still how curious and how provoking it is that neither White of Selborne, Bewick, Yarrell, nor Gould, says a word about this, one should have thought the most interesting, power of the bird.†

Taking Michelet's estimate—eighty French leagues, roughly two hundred and fifty miles, an hour—we have a thousand miles in four hours. That is to say, leaving Devonshire after an early breakfast, he could be in Africa to lunch.

49. He could, I say, if his flight were constant; but though there is much inconsistency in the accounts, the sum of testimony seems definite that the swallow is among the most fatiguable of birds. "When the weather is hazy" (I quote Yarrell), "they will alight on fishing-boats a league or two from land, so tired that when any one tries to catch them, they can scarcely fly from one end of the boat to the other."[2]

I have no time to read to you the interesting evidence on this point given by Yarrell, but only that of the brother of White of Selborne, at Gibraltar. "My brother has

* I wrote this some time ago, and the endeavours I have since made to verify statements on points of natural history which I had taken on trust have given me reason to doubt everybody's accuracy. The ordinary flight of the swallow does not, assuredly, even in the dashes, reach anything like this speed.[3]

† Incidentally suggestive sentences occur in the history of Selborne, but its author never comes to the point, in this case.

---

[1] [See p. 198 of the English edition of Michelet's *The Bird*.]

[2] [*A History of British Birds*, by William Yarrell, 3rd ed., 1856, vol. ii. p. 53.]

[3] [See below, § 144, p. 137. Particulars of recent experiments will be found in F. W. Headley's *Structure and Life of Birds*, 1895, pp. 268 *seq.* The racing records of homing pigeons show a rate of not more than sixty miles an hour; swallows are said to have attained a rate of 106 miles.]

always found," he himself writes, "that some of his birds, and particularly the swallow kind, are very sparing of their pains in crossing the Mediterranean; for when arrived at Gibraltar, they do not "set forth their airy caravan, high over seas,"[1] but scout and hurry along in little detached parties of six or seven in a company; and sweeping low, just over the surface of the land and water, direct their course to the opposite continent at the narrowest passage they can find."[2]

50. You will observe, however, that it remains an open question whether this fear of sea may not be, in the swallow, like ours of the desert. The commissariat department is a serious one for birds that eat a thousand flies a day when just out of the egg; and it is possible that the weariness of swallows at sea may depend much more on fasting than flying. Captain (or Admiral?) Sir Charles Wager[3] says that "one spring-time, as he came into soundings in the English Channel, a great flock of swallows came and settled on all his rigging; every rope was covered; they hung on one another like a swarm of bees; even the decks were filled with them. They seemed almost famished and spent, and were only feathers and bone; but, being recruited with a night's rest, took their flight in the morning."[4]

51. Now I detain you on this point somewhat, because it is intimately connected with a more important one. I told you[5] we should learn from the swallow what a wing was. Few other birds approach him in the beauty of it, or apparent power. And yet, after all this care taken about it, he gets tired; and instead of flying, as we should do in his place, all over the world, and tasting the flavour of the midges in every marsh which the infinitude of

[1] [Milton: *Paradise Lost*, vii. 428; quoted by Ruskin in Vol. XVII. p. 249.]
[2] [*The Natural History of Selborne*, Letter XLII.]
[3] [Sir Charles Wager (1666–1743): admiral, 1731; First Lord of the Admiralty, 1733–1742.]
[4] [Quoted in Yarrell, vol. ii. pp. 245–246 (4th ed.).]
[5] [See above, § 19, p. 30.]

human folly has left to breed gnats instead of growing corn,—he is of all birds, characteristically, except when he absolutely can't help it, the stayer at home; and contentedly lodges himself and his family in an old chimney, when he might be flying all over the world.

At least you would think, if he built in an English chimney this year, he would build in a French one next. But no. Michelet prettily says of him, "He is the bird of return."[1] If you will only treat him kindly, year after year, he comes back to the same niche, and to the same hearth, for his nest.

To the same niche; and builds himself an opaque walled house within that. Think of this a little, as if you heard of it for the first time.

52. Suppose you had never seen a swallow; but that its general habit of life had been described to you, and you had been asked, how you thought such a bird would build its nest. A creature, observe, whose life is to be passed in the air; whose beak and throat are shaped with the fineness of a net for the catching of gnats; and whose feet, in the most perfect of the species, are so feeble that it is called the Footless Swallow, and cannot stand a moment on the ground with comfort. Of all land birds, the one that has least to do with the earth; of all, the least disposed, and the least able, to stop to pick anything up. What will it build with? Gossamer, we should say,—thistledown,—anything it can catch floating, like flies.

But it builds with stiff clay.

53. And observe its chosen place for building also. You would think, by its play in the air, that not only of all birds, but of all creatures, it most delighted in space and freedom. You would fancy its notion of the place for a nest would be the openest field it could find; that anything like confinement would be an agony to it; that it would almost expire of horror at the sight of a black hole.

[1] [At p. 194 of the English edition.]

And its favourite home is down a chimney.

54. Not for your hearth's sake, nor for your company's. Do not think it. The bird will love you if you treat it kindly; is as frank and friendly as bird can be; but it does not, more than others, seek your society. It comes to your house because in no wild wood, nor rough rock, can it find a cavity close enough to please it. It comes for the blessedness of imprisonment, and the solemnity of an unbroken and constant shadow, in the tower, or under the eaves.

Do you suppose that this is part of its necessary economy, and that a swallow could not catch flies unless it lived in a hole?

Not so. This instinct is part of its brotherhood with another race of creatures. It is given to complete a mesh in the reticulation of the orders of life.

55. I have already given you several reasons for my wish that you should retain, in classifying birds, the now rejected order of Picae.[1] I am going to read you a passage from Humboldt, which shows you what difficulties one may get into for want of it.

You will find in the second volume of his personal narrative, an account of the cave of Caripe in New Andalusia, which is inhabited by entirely nocturnal birds, having the gaping mouths of the goat-sucker and the swallow, and yet feeding on fruit.[2]

Unless, which Mr. Humboldt does not tell us, they sit under the trees outside, in the night time, and hold their mouths open, for the berries to drop into, there is not the smallest occasion for their having wide mouths, like swallows. Still less is there any need, since they are fruit eaters, for their living in a cavern 1500 feet out of daylight. They have only, in consequence, the trouble of

[1] [Partly stated in *Eagle's Nest*, § 188 (Vol. XXII. p. 249); and see now the additional passage from Ruskin's MSS., given below, p. 175.]

[2] [*Personal Narrative of Travels to the Equinoctial Regions of the New Continent*, translated by Helen Maria Williams, 1818, vol. iii. pp. 125–127.]

carrying in the seeds to feed their young, and the floor of the cave is thus covered, by the seeds they let fall, with a growth of unfortunate pale plants, which have never seen day. Nay, they are not even content with the darkness of their cave; but build their nests in the funnels with which the roof of the grotto is pierced like a sieve; live actually in the chimney, not of a house, but of an Egyptian sepulchre! The colour of this bird, of so remarkable taste in lodging, Humboldt tells us, is "of dark bluish-grey, mixed with streaks and specks of black. Large white spots, which have the form of a heart, and which are bordered with black, mark the head, the wings, and the tail. The spread of the wings, which are composed of seventeen or eighteen quill feathers, is three feet and a half. Suppressing, with Mr. Cuvier, the order of Picae, we must refer this extraordinary bird to the *Sparrows*."

56. We can only suppose that it must be, to our popular sparrows, what the swallow of the cinnamon country is to our subordinate swallow. Do you recollect the cinnamon swallows of Herodotus,[1] who build their mud nests in the faces of the cliffs where Dionusos was brought up, and where nobody can get near them; and how the cinnamon merchants fetch them joints of meat, which the unadvised birds, flying up to their nests with, instead of cinnamon,—nest and all come down together,—the original of Sinbad's valley-of-diamond story?[2]

57. Well, Humboldt is reduced, by necessities of recent classification, to call a bird three feet and a half across

[1] [Book iii. ch. iii.]

[2] ["In the mountains of the diamonds are experienced great terrors, and no one can gain access to the diamonds, but the merchants who import them know a stratagem by means of which to obtain them: they take a sheep, and slaughter it, and skin it, and cut up its flesh, which they throw down from the mountain to the bottom of the valley: so, descending fresh and moist, some of these stones stick to it. Then the merchants leave it until midday, and birds of the large kind of vulture and the aquiline vulture descend to that meat, and, taking it in their talons, fly up to the top of the mountain; whereupon the merchants come to them, and cry out at them, and they fly away from the meat. The merchants then advance to that meat, and take from it the stones sticking to it; after which they leave the meat for the birds and the wild beasts, and carry the stones to their countries" (Lane's *Arabian Nights*, 1889, vol. iii. p. 19).]

the wings, a sparrow. I have no right to laugh at him, for I am just going, myself, to call the cheerfullest and brightest of birds of the air, an owl. All these architectural and sepulchral habits, these Egyptian manners of the sand-martin, digging caves in the sand, and border-trooper's habits of the chimney swallow, living in round towers instead of open air, belonging to them as connected with the tribe of the falcons through the owls! and not only so, but with the mammalia through the bats! A swallow is an emancipated owl, and a glorified bat; but it never forgets its fellowship with night.

58. Its *ancient* fellowship, I had nearly written; so natural is it to think of these similarly-minded creatures, when the feelings that both show are evidently useless to one of them, as if the inferior had changed into the higher. The doctrine of development seems at first to explain all so pleasantly, that the scream of consent with which it has been accepted by men of science, and the shriller vociferation of the public's gregarious applause, scarcely permit you the power of antagonist reflection. I must justify to-day, in graver tone than usual, the terms in which I have hitherto spoken,—it may have been thought with less than the due respect to my audience,[1]—of the popular theory.

59. Supposing that the octohedrons of galena, of gold, and of oxide of iron, were endowed with powers of reproduction, and perished at appointed dates of dissolution or solution, you would without any doubt have heard it by this time asserted that the octohedric form, which was common to all, indicated their descent from a common progenitor; and it would have been ingeniously explained to you how the angular offspring of this eight-sided ancestor had developed themselves, by force of circumstances, into their distinct metallic perfections; how the galena had become grey and brittle under prolonged subterranean heat, and the gold yellow and ductile, as it was rolled among the pebbles of amber-coloured streams.

[1] [On this passage, see the Introduction (above, p. xxxi.).]

60. By the denial to these structures of any individually reproductive energy, you are forced to accept the inexplicable (and why expect it to be otherwise than inexplicable?) fact, of the formation of a series of bodies having very similar aspects, qualities, and chemical relations to other substances, which yet have no connection whatever with each other, and are governed, in their relation with their native rocks, by entirely arbitrary laws. It has been the pride of modern chemistry to extricate herself from the vanity of the alchemist, and to admit, with resignation, the independent, though apparently fraternal, natures, of silver, of lead, of platinum,—aluminium,—potassium. Hence, a rational philosophy would deduce the probability that when the arborescence of dead crystallization rose into the radiation of the living tree, and sentient plume, the splendour of nature in her more exalted power would not be restricted to a less variety of design; and the beautiful caprice in which she gave to the silver its frost and to the opal its fire, would not be subdued under the slow influences of accident and time, when she wreathed the swan with snow, and bathed the dove in iridescence. That the infinitely more exalted powers of life must exercise more intimate influence over matter than the reckless forces of cohesion; —and that the loves and hatreds of the now conscious creatures would modify their forms into parallel beauty and degradation, we might have anticipated by reason, and we ought long since to have known by observation. But this law of its spirit over the substance of the creature involves, necessarily, the indistinctness of its type, and the existence of inferior and of higher conditions, which whole æras of heroism and affection—whole æras of misery and misconduct,—confirm into glory, or confuse into shame. Collecting the causes of changed form, in lower creatures, by distress, or by adaptation,—by the disturbance or intensifying of the parental strength, and the native fortune—the wonder is, not that species should sometimes be confused, but that the greater number of them remain so

splendidly, so manifestly, so eternally distinct; and that the vile industries and vicious curiosities of modern science,[1] while they have robbed the fields of England of a thousand living creatures, have not created in them one.

61. But even in the paltry knowledge we have obtained, what unanimity have we?—what security? Suppose any man of ordinary sense, knowing the value of time, and the relative importance of subjects of thought, and that the whole scientific world was agog concerning the origin of species, desired to know first of all—what was meant by a species.

He would naturally look for the definition of species first among the higher animals, and expect it to be best defined in those which were best known. And being referred for satisfaction to the 226th page of the first volume of Mr. Darwin's *Descent of Man*, he would find this passage:—

"Man has been studied more carefully than any other organic being, and yet there is the greatest possible diversity among capable judges, whether he should be classed as a single species or race, or as two (Virey), as three (Jacquinot), as four (Kant), five (Blumenbach), six (Buffon), seven (Hunter), eight (Agassiz), eleven (Pickering), fifteen (Bory St. Vincent), sixteen (Desmoulins,) twenty-two (Morton), sixty (Crawford), or as sixty-three according to Burke."

And in the meantime, while your men of science are thus vacillating, in the definition of the species of the only animal they have the opportunity of studying inside and out, between one and sixty-three; and disputing about the origin, in past ages, of what they cannot define in the present ones; and deciphering the filthy heraldries which record the relation of humanity to the ascidian and the crocodile, you have ceased utterly to distinguish between the two species of man, evermore separate by infinite separation: of whom the one, capable of loyalty and of love, can at least conceive spiritual natures which have no taint from their own, and leave behind them, diffused among thousands on earth, the happiness they never hoped, for themselves, in the skies; and the other, capable only of

[1] [On this passage, see below, p. 163.]

avarice, hatred, and shame, who in their lives are the companions of the swine, and leave in death nothing but food for the worm and the vulture.

62. Now I have first traced for you the relations of the creature we are examining to those beneath it and above, to the bat and to the falcon. But you will find that it has still others to entirely another world. As you watch it glance and skim over the surface of the waters, has it never struck you what relation it bears to the creatures that glance and glide *under* their surface? Fly-catchers, some of them, also,—fly-catchers in the same manner, with wide mouth; while in motion the bird almost exactly combines the dart of the trout with the dash of the dolphin, to the rounded forehead and projecting muzzle of which its own bullet head and bill exactly correspond. In its plunge, if you watch it bathing, you may see it dip its breast just as much under the water as a porpoise shows its back above. You can only rightly describe the bird by the resemblances, and images of what it seems to have changed from,—then adding the fantastic and beautiful contrast of the unimaginable change. It is an owl that has been trained by the Graces. It is a bat that loves the morning light. It is the aërial reflection of a dolphin. It is the tender domestication of a trout.

68. And yet be assured, as it cannot have been all these creatures, so it has never, in truth, been any of them. The transformations believed in by the mythologists are at least spiritually true; you cannot too carefully trace or too accurately consider them. But the transformations believed in by the anatomist are as yet proved true in no single instance, and in no substance, spiritual or material; and I cannot too often, or too earnestly, urge you not to waste your time in guessing what animals may once have been, while you remain in nearly total ignorance of what they are.

64. Do you even know distinctly from each other,—(for that is the real naturalist's business; instead of confounding

them with each other),—do you know distinctly the five great species of this familiar bird?—the swallow, the house-martin, the sand-martin, the swift, and the Alpine swift?—or can you so much as answer the first question which would suggest itself to any careful observer of the form of its most familiar species,—yet which I do not find proposed, far less answered, in any scientific book,—namely, why a swallow has a swallow-tail?[1]

It is true that the tail feathers in many birds appear to be entirely,—even cumbrously, decorative; as in the peacock, and birds of paradise. But I am confident that it is not so in the swallow, and that the forked tail, so defined in form and strong in plume, has indeed important functions in guiding the flight; yet notice how surrounded one is on all sides with pitfalls for the theorists. The forked tail reminds you at once of a fish's; and yet, the action of the two creatures is wholly contrary. A fish lashes himself forward with his tail, and steers with his fins; a swallow lashes himself forward with his fins, and steers with his tail; partly, not necessarily, because in the most dashing of the swallows, the swift, the fork of the tail is the least developed. And I never watch the bird for a moment without finding myself in some fresh puzzle out of which there is no clue in the scientific books. I want to know, for instance, how the bird turns. What does it do with one wing, what with the other? Fancy the pace that has to be stopped; the force of bridle-hand put out in an instant. Fancy how the wings must bend with the strain; what need there must be for the perfect aid and work of every feather in them. There is a problem for you, students of mechanics,—How does a swallow turn?[2]

You shall see, at all events, to begin with, to-day, how it gets along.

[1] [A letter on this question by his friend, R. C. Leslie, was preserved by Ruskin among material for the intended continuation of *Love's Meinie*, and is now printed below, p. 177.]

[2] [On the challenge given in this question, see in a later volume the "Letters on a Museum or Picture Gallery" (Easter Tuesday, 1880).]

65. I say you shall see; but indeed you have often seen, and felt,—at least with your hands, if not with your shoulders,—when you chanced to be holding the sheet of a sail.

I have said that I never got into scrapes by blaming people wrongly; but I often do by praising them wrongly. I never praised, without qualification, but one scientific book in my life (that I remember)—this of Dr. Pettigrew's on the Wing;*—and now I must qualify my praise[1] considerably, discovering, when I examined the book farther,

* "On the Physiology of Wings" (*Transactions of the Royal Society of Edinburgh*, vol. xxvi., part ii.[2]). I cannot sufficiently express either my wonder or regret at the petulance in which men of science are continually tempted into immature publicity, by their rivalship with each other.[3] Page after page of this book, which, slowly digested and taken counsel upon, might have been a noble contribution to natural history, is occupied with dispute utterly useless to the reader, on the question of the priority of the author, by some months, to a French savant,[4] in the statement of a principle which neither has yet proved; while page after page is rendered worse than useless to the reader by the author's passionate endeavour to contradict the ideas of unquestionably previous investigators. The problem of flight was, to all serious purpose, solved by Borelli in 1680,[5] and the following passage is very notable as an example of the way in which the endeavour to obscure the light of former ages too fatally dims and distorts that by which modern men of science walk, themselves. "Borelli, and all who have written since his time, are unanimous in affirming that the horizontal transference of the body of the bird is due to the perpendicular vibration of the wings, and to the yielding of the posterior or flexible margins of the wings in an upward direction, as the wings descend. I" (Dr. Pettigrew[6]) "am, however, disposed to attribute it to the fact (1st), that *the wings*, both when elevated and depressed, *leap forwards* in curves, those curves uniting to form a continuous waved track; (2nd), *to the tendency which the body of the bird has to swim forwards*, in a more or less horizontal direction, *when once set in motion;* (3rd), to the construction of the wings; they are elastic helices or screws, which twist and untwist while they vibrate, *and tend to bear upwards and onwards any weight suspended from them;* (4th), *to the action of the air on the under surfaces* of the wings;

[1] [Expressed, probably, in this lecture as originally delivered (May 1873), the lecture being subsequently revised for the press.]

[2] [1872, pp. 321–448—a long paper, it will be seen, equivalent to a "book."]

[3] [On this subject compare *Two Paths*, § 139 (Vol. XVI. p. 374); *Fors Clavigera*, Letter 7, § 10, and Letter 34, § 15.]

[4] [Professor E. J. Marcy: see pp. 331 *seq.*]

[5] [*De Motu Animalium Io. Alphonsi Borelli Neapolitani Matheseos Professoris opus posthumum:* Rome, 1680.]

[6] [See p. 417 in the *Transactions*.]

that the good doctor had described the motion of a bird as resembling that of a kite, without ever inquiring what, in a bird, represented that somewhat important part of a kite, the string. You will, however, find the book full of important observations, and illustrated by valuable drawings. But the point in question you must settle for yourselves, and you easily may. Some of you perhaps knew, in your time, better than the doctor, how a kite stopped; but I do not doubt that a great many of you also know, now, what is much more to the purpose, how a ship gets along. I will take the simplest, the most natural, the most beautiful of sails,—the lateen sail of the Mediterranean.

66. I draw it rudely in outline, as it would be set for a side-wind on the boat you probably know best,—the boat of burden on the Lake of Geneva (Fig. 8), not confusing the drawing by adding the mast, which, you know,

(5th), *to the ever-varying power with which the wings are urged*, this being greatest at the beginning of the down-stroke, and least at the end of the up one; (6th), *to the contraction of the voluntary muscles* and elastic ligaments, and to the effect produced by the various inclined surfaces formed by the wings during their oscillations; (7th), *to the weight of the bird*—weight itself, when acting upon wings, becoming a propelling power, and so contributing to horizontal motion."

I will collect these seven reasons for the forward motion, in the gist of them, which I have marked by italics, that the reader may better judge of their collective value. The bird is carried forward, according to Dr. Pettigrew—

1. Because its wings leap forward.
2. Because its body has a tendency to swing forward.
3. Because its wings are screws so constructed as to screw upwards and onwards any body suspended from them.
4. Because the air reacts on the under surfaces of the wings.
5. Because the wings are urged with ever-varying power.
6. Because the voluntary muscles contract.
7. Because the bird is heavy.

What must be the general conditions of modern science, when it is possible for a man of great experimental knowledge and practical ingenuity, to publish nonsense such as this, becoming, to all intents and purposes, insane, in the passion of his endeavour to overthrow the statements of his rival? Had he merely taken patience to consult any elementary scholar in dynamics, he would have been enabled to understand his own machines, and develop, with credit to himself, what had been rightly judged or noticed by others.

rakes a little, carrying the yard across it (*a*). Then, with your permission, I will load my boat thus, with a few casks of Vevay vintage—and, to keep them cool, we will put an awning over them, so (*b*). Next, as we are classical scholars, instead of this rustic stern of the boat, meant only to run easily on a flat shore, we will give it

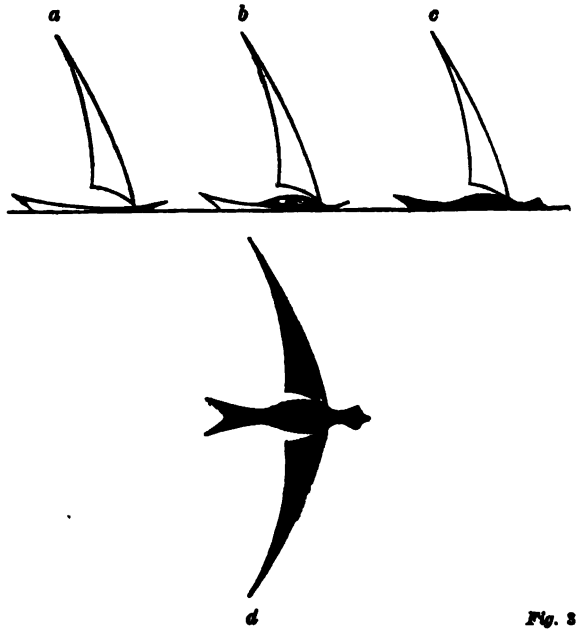



Fig. 8

an Attic ἔμβολον[1] (*c*). (We have no business, indeed, yet, to put an ἔμβολον on a boat of burden, but I hope some day to see all our ships of war loaded with bread and wine, instead of artillery.) Then I shade the entire form (*c*); and, lastly, reflect it in the water (*d*)—and you have seen something like that before, besides a boat, haven't you?

There is the gist of the whole business for you, put in very small space; with these only differences: in a boat,

[1] [On this term, see further in the lecture on the Chough, § 164, p. 157.]

the air strikes the sail; in a bird, the sail strikes the air: in a boat, the force is lateral, and in a bird downwards; and it has its sail on both sides. I shall leave you to follow out the mechanical problem for yourselves, as far as the mere resolution of force is concerned. My business, as a painter, is only with the exquisite organic weapon that deals with it.

67. Of which you are now to note farther, that a bird is required to manage his wing so as to obtain two results with one blow:—he has to keep himself up, as well as to get along.

But observe, he only requires to keep himself up *because* he has to get along. The buoyancy might have been given at once, if nature had wanted *that* only; she might have blown the feathers up with the hot air of the breath, till the bird rose in air like a cork in water. But it has to be, not a buoyant cork, but a buoyant *bullet.* And therefore that it may have momentum for pace, it must have weight to carry; and to carry that weight, the wings must deliver their blow with effective vertical, as well as oblique, force.

Here, again, you may take the matter in brief sum. Whatever is the ship's loss, is the bird's gain; whatever tendency the ship has to leeway, is all given to the bird's support, so that every atom* of force in the blow is of service.

68. Therefore you have to construct your organic weapon, so that this absolutely and perfectly economized force may be distributed as the bird chooses at any moment. That, if it wants to rise, it may be able to strike vertically more than obliquely;—if the order is, go a-head, that it may put the oblique screw on. If it wants to stop in an instant, that it may be able to throw its wings up full to the wind; if it wants to hover, that it may be able to

* I don't know what word to use for an infinitesimal degree or divided portion of force: one cannot properly speak of a force being cut into pieces; but I can think of no other word than atom.

lay itself quietly on the wind with its wings and tail, or, in calm air, to regulate their vibration and expansion into tranquillity of gliding, or of pausing power. Given the various proportions of weight and wing; the conditions of possible increase of muscular force and quill-strength in proportion to size; and the different objects and circumstances of flight,—you have a series of exquisitely complex problems, and exquisitely perfect solutions, which the life of the youngest among you cannot be long enough to read through so much as once, and of which the future infinitudes of human life, however granted or extended, never will be fatigued in admiration.

69. I take the rude outline of sail in Fig. 3, and now considering it as a jib of one of our own sailing vessels, slightly exaggerate the loops at the edge, and draw curved lines from them to the opposite point, Fig. 4; and I have a reptilian or dragon's wing, which would, with some ramification of the supporting ribs, become a bat's or moth's; that is to say, an extension of membrane between the ribs (as in an umbrella), which will catch the wind, and flutter upon it, like a leaf; but cannot strike it to any purpose. The flying squirrel drifts like a falling leaf; the bat flits like a black rag torn at the edge. To give power, we must have plumes that can strike, as with the flat of a sword-blade; and to give *perfect* power, these must be laid over each other, so that each may support the one below it. I use the word below advisedly: we have to strike *down*. The lowest feather is the one that first meets the adverse force. It is the one to be supported.

Fig. 4

Now for the manner of the support. You must all know well the look of the machicolated parapets in mediæval castles. You know they are carried on rows of small projecting buttresses constructed so that, though the uppermost stone, far-projecting, would break easily under any

shock, it is supported by the next below, and so on, down to the wall. Now in this figure I am obliged to separate the feathers by white spaces, to show you them distinctly. In reality they are set as close to each other as can be, but putting them as close as I can, you get *a* or *b*, Fig. 5, for the rough section of the wing, thick towards the bird's head, and curved like a sickle, so that in striking down it catches the air, like a reaping-hook, and in rising up, it throws off the air like a penthouse.

70. The stroke would therefore be vigorous, and the recovery almost effortless, were even the direction of both actually vertical. But they are vertical only with relation to the bird's body. In space they follow the forward flight,

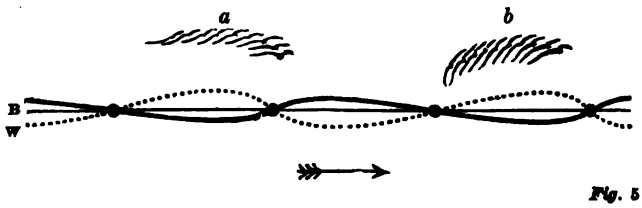



Fig. 5

in a softly curved line; the downward stroke being as effective as the bird chooses, the recovery scarcely encounters resistance in the softly gliding ascent. Thus, in Fig. 5 (I can only explain this to readers a little versed in the elements of mechanics), if B is the locus of the centre of gravity of the bird, moving in slow flight in the direction of the arrow, W is the locus of the leading feather of its wing, and *a* and *b*, roughly, the successive positions of the wing in the down-stroke and recovery.

71. I say the down-stroke is as effective as the bird chooses; that is to say, it can be given with exactly the quantity of impulse, and exactly the quantity of supporting power, required at the moment. Thus, when the bird wants to fly slowly, the wings are fluttered fast, giving vertical blows; if it wants to pause absolutely in still air (this large birds cannot do, not being able to move their

wings fast enough), the velocity becomes vibration, as in the humming-bird: but if there is wind, any of the larger birds can lay themselves on it like a kite, their own weight answering the purpose of the string,* while they keep the wings and tail in an inclined plane, giving them as much gliding ascent as counteracts the fall. They nearly all, however, use some slightly gliding force at the same time; a single stroke of the wing, with forward intent, seeming enough to enable them to glide on for half a minute or more without stirring a plume. A circling eagle floats an inconceivable time without visible stroke (fancy the pretty action of the inner wing, *backing* air instead of water, which gives exactly the breadth of circle he chooses). But for exhibition of the complete art of flight, a swallow on rough water is the master of masters. A seagull, with all its splendid power, generally has its work cut out for it, and is visibly fighting; but the swallow plays with wind and wave as a girl plays with her fan, and there are no words to say how many things it does with its wings in any ten seconds, and does consummately. The mystery of its dart remains always inexplicable to me; no eye can trace the bending of bow that sends that living arrow.

But the main structure of the noble weapon we may with little pains understand.

72. In the sections *a* and *b* of Fig. 5, I have only represented the quills of the outer part of the wing. The relation of these, and of the inner quills, to the bird's body may be very simply shown.

Fig. 6 is a rude sketch, typically representing the wing of any bird, but actually founded chiefly on the seagull's.

It is broadly composed of two fans, A and B. The outmost fan, A, is carried by the bird's hand; of which I rudely sketch the contour of the bones at *a*. The innermost fan, B, is carried by the bird's fore-arm, from wrist to elbow, *b*.

* See Appendix, § 145 [p. 138].

The strong humerus, *c*, corresponding to our arm from shoulder to elbow, has command of the whole instrument. No feathers are attached to this bone; but covering and protecting ones are set in the skin of it, completely filling, when the active wing is open, the space between it and the body. But the plumes of the two great fans, A and B, are set into the bones; in Fig. 8, farther on, are shown the projecting knobs on the main arm bone, set for the reception of the quills, which make it look like the club of Hercules. The connection of the still more powerful quills of the outer fan with the bones of the hand is quite beyond all my poor anatomical perceptions, and, happily for me, also beyond needs of artistic investigation.

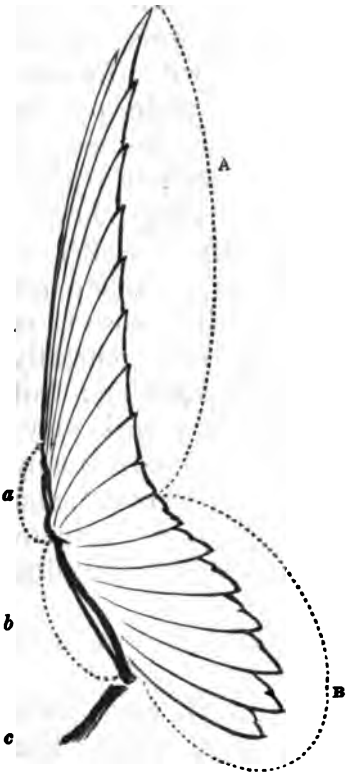


Fig. 6

73. The feathers of the fan A are called the primaries. Those of the fan B, secondaries. Effective actions of flight, whether for support or forward motion, are, I believe, all executed with the primaries, every one of which may be briefly described as the strongest scymitar that can be made of quill substance; flexible within limits, and elastic at its edges—carried by an elastic central shaft—twisted like a windmill sail—striking with the flat, and recovering with the edge.

The secondary feathers are more rounded at the ends, and frequently notched; their curvature is reversed to that of the primaries; they are arranged, when expanded, somewhat in the shape of a shallow cup, with the hollow of it downwards, holding the air therefore, and aiding in all the

pause and buoyancy of flight, but little in the activity of it. Essentially they are the brooding and covering feathers of the wing; exquisitely beautiful—as far as I have yet seen, *most* beautiful—in the bird whose brooding is of most use to us; and which has become the image of all tenderness. "How often would I have gathered thy children . . . and ye would not."[1]

74. Over these two chief masses of the plume are set others which partly complete their power, partly adorn and

*Fig.* 7

protect them; but of these I can take no notice at present. All that I want you to understand is the action of the two main masses, as the wing is opened and closed.

Fig. 7 roughly represents the upper surface of the main feathers of the wing closed. The secondaries are folded over the primaries; and the primaries shut up close, with their outer edges parallel, or nearly so. Fig. 8 roughly shows the outline of the bones, in this position, of one of the larger pigeons.*

75. Then Fig. 9 is (always sketched in the roughest

* I find even this mere outline of anatomical structure so interfere with the temper in which I wish my readers to think, that I shall withdraw it in my complete edition.[2]

[1] [Matthew xxiii. 37.]

[2] [No other edition was, however, prepared by Ruskin (see above, p. xxxii.). The diagrams referred to in his note on the next page are not now available.]

way) the outer, Fig. 10 the inner, surface of a seagull's wing in this position. Next, Fig. 11 shows the tops of the four lowest feathers in Fig. 9, in mere outline; A separate (pulled off, so that they can be set side by side), B shut up close in the folded wing, C, opened in the spread wing.

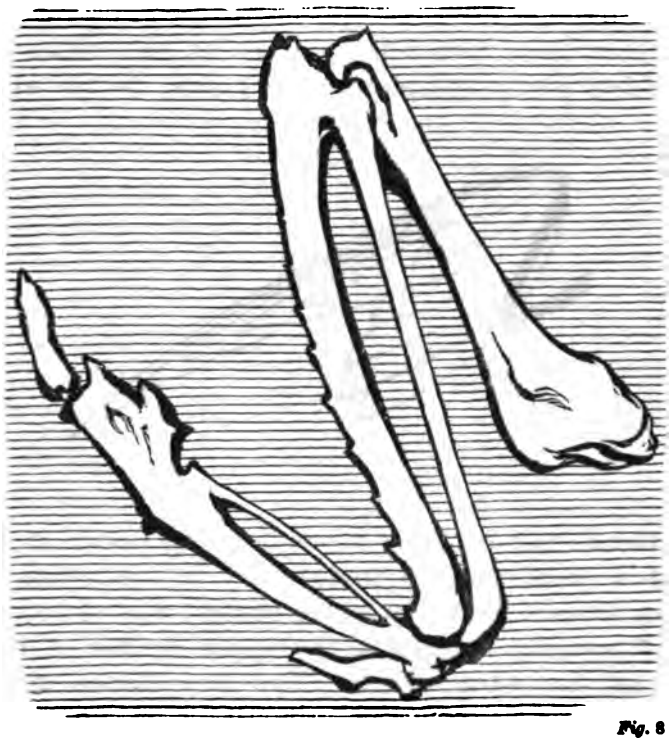


Fig. 8

76. And now, if you will yourselves watch a few birds in flight, or opening and closing their wings to prune them, you will soon know as much as is needful for our art purposes; and, which is far more desirable, feel how very little we know, to any purpose, of even the familiar creatures that are our companions.

Even what we have seen to-day* is more than appears

* Large and somewhat carefully painted diagrams were shown at the lecture, which I cannot engrave but for my complete edition.

to have been noticed by the most careful painters of the great schools; and you will continually fancy that I am inconsistent with myself in pressing you to learn, better than they, the anatomy of birds, while I violently and constantly urge you to refuse the knowledge of the anatomy of men. But you will find, as my system develops itself, that it is absolutely consistent throughout. I don't mean, by telling you not to study human anatomy, that you are not to know how many fingers and toes you have, nor how you can grasp and walk with them; and, similarly, when you look at a bird, I wish you to know how many claws and wing-feathers it has, and how it grips and flies with them. Of the bones, in either, I shall show you little; and of the muscles, nothing but what can be seen in the living creature, nor, often, even so much.

77. And accordingly, when I now show you this sketch of my favourite Holbein,[1] and tell you that it is entirely disgraceful he should not know what a wing was, better,—I don't mean that it is disgraceful he should not know the anatomy of it, but that he should never have looked at it to see how the feathers lie.

Now Holbein paints men gloriously, but never looks at birds;[2] Gibbons,[3] the wood-cutter, carves birds, but can't men;—of the two faults the last is the worst; but the right is in looking at the whole of nature in due comparison, and with universal candour and tenderness.

78. At the whole of nature, I say, not at *super*-nature —at what you suppose to be above the visible nature about you. If you are not inclined to look at the wings of birds, which God has given you to handle and to see, much less are you to contemplate, or draw imaginations of, the wings of angels, which you can't see. Know your own world first—not denying any other, but being quite sure

[1] [Here Ruskin may have shown Holbein's woodcut of the expulsion from the Garden of Eden; in which the wing of the angel fully justifies the strictures in the text.]

[2] [But see § 87, below, p. 78.]

[3] [Grinling Gibbons, wood-carver, 1648–1720.]

## LECTURE III[1]

### THE DABCHICKS

81. I BELIEVE that somewhere I have already observed,[2] but permit myself, for immediate use, to repeat what I cannot but think the sagacious observation,—that the arrangement of any sort of animals must be, to say the least, imperfect, if it be founded only on the characters of their feet. And, of all creatures, one would think birds were those which, continually dispensing with the use of their feet, would require for their classification some attention also to be paid to their bodies and wings,—not to say their heads and tails. Nevertheless, the ornithological arrangement at present in vogue may suffice for most scientific persons; but in grouping birds, so that the groups may be understood and remembered by children, I must try to make them a little more generally descriptive.

82. In talking of parrots, for instance, it is only a small part of the creature's nature which is told by its scientific name of "Scansor," or "Climber." That it only clutches with its claws, and does not snatch or strike with them;—that it helps itself about with its beak, on branches, or bars of cage, in an absurd manner, as if partly imagining itself hung up in a larder, are by no means the most vital matters about the bird. Whereas, that its beak is always extremely short, and is bent down so roundly that the angriest parrot cannot peck, but only *bite*, if you give it a chance; that it *can* bite, pinch, or otherwise apply the mechanism of a pair of nut-crackers from the back of its

[1] [This chapter, though called "Lecture," was not in fact delivered as such.]
[2] [See *Eagle's Nest*, §§ 187, 188 (Vol. XXII. p. 248).]

UNIV. OF CALIFORNIA

Drawn by J Ruskin Engraved by Hugh Allen

YOUNG AVOSET (REAL SIZE)

UNIV. OF
CALIFORNIA

head, with effect; that it has a little black tongue capable of much talk; above all, that it is mostly gay in plumage, often to vulgarity, and always to pertness;—all these characters should surely be represented to the apprehensive juvenile mind, in sum; and not merely the bird's climbing qualities.

88. Again, that the race of birds called in Latin "Rasores"[1] *do*, in the search for their food, usually scratch, and kick out their legs behind, living for the most part in gravelly or littery places, of which the hidden treasures are only to be discovered in that manner, seems to me no supremely interesting custom of the animal's life, but only a *manner* of its household, or threshold, economy. But that the tribe, on the whole, is unambitiously domestic, and never predatory; that they fly little and low, eat much of what they can pick up without trouble—and are *themselves* always excellent eating;—yet so exemplary in their own domestic cares and courtesies that one is ashamed to eat them except in eggs;—that their plumage is for the most part warm brown, delicately and even bewitchingly spotty;—and that, in the goodliest species, the spots become variegated, and inlaid as in a Byzantine pavement, deepening to imperial purple and azure, and lightening into lustre of innumerable eyes;—all this, I hold, very clearly and positively, should be explained to children as a part of science, quite as exact, and infinitely more gracious, than that which reckons up the whole tribe of loving and luminous creatures under the feebly descriptive term of "Scratchers."

I will venture therefore to recommend my younger readers, in classing birds, to think of them literally from top to toe—from toe to top I should say,—foot, body, and head, studying, with the body, the wings that bear it; and with the head, what brains it can bring to bear on practical matters, and what sense, on sentimental. But indeed,

[1] [See below, § 88 (No. 9), p. 80.]

primarily, you have to consider whether the bird altogether may not be little more than a fat, cheerful little stomach, in a spotted waistcoat, and with legs to it. That is the main definition of a great many birds—meant to eat all day, chiefly, grubs, or grain—not at all, unless under wintry and calamitous conditions, meant to fast painfully, or be in concern about their food. Faultless in digestion—dinner lasting all day long, with the delight of social intercourse—various chirp and chatter. Flying or fluttering in a practical, not stately, manner: hopping and creeping intelligently. Sociable to man extremely, building and nestling and rustling about him,—prying and speculating, curiously watchful of him at his work, if likely to be profitable to themselves, or even sometimes in mere pitying sympathy, and wonder how such a wingless and beakless creature can do *any*thing.*

84. The balance of this kind of bird on its legs is a very important part of its—diagnosis (we must have a fine word now and then!). Its action on the wing, is mere flutter or flirt, in and out of the hedge, or over it; but its manner of perch, or literally "bien-séance," is admirable matter of interest. So also in the birds which are on the water what these are on land; picking up anything anywhere; lazy and fortunate, mostly, themselves; fat, floating, daintiest darlings;—*their* balance on the water, also, and under it, in "ducking," a most essential part of their business and being.

85. Then, directly opposed to these, in both kinds, you have the birds which must fast long, and fly far, and watch or fight for their food. Not stomachic in profile; far from cheerful in disposition; more or less lonely in

* Compare *Paradise of Birds* (song to the young Roc, page 67), and see close of lecture for notes on that book.[1]

[1] [*The Paradise of Birds: an Old Extravaganza in a Modern Dress*, by William John Courthope, 1870. Ruskin's reference is to the second edition, 1873: the song begins, "O unhatched Bird, so high preferred." For another reference to the book, see *Mornings in Florence*, § 137 (Vol. XXIII. p. 429 *n.*).]

habit; or, if gregarious, out of the way of men. The balance of these on the wing, is no less essential a part of their picturing, than that of the buntings, robins, and ducks on the foot, or breast: and therefore, especially the position of the head in flying.

86. Accordingly, for complete ornithology, *every* bird must be drawn, as every flower for good botany, both in profile, and looking down upon it:[1] but for the perchers, the standing profile is the most essential; and for the falcons and gulls, the flying *plan*,—the outline of the bird, as it would be seen looking down on it, when its wings were full-spread.

Then, in connection with these general outlines, we want systematic plan and profile of the foot and head; but since we can't have everything at once, let us say the plan of the foot, and profile of the head, quite accurately given; and for every bird consistently, and to scale.

Profile and plan in outline; then, at least the *head* in light and shade, from life, so as to give the expression of the eye. Fallacious, this latter, often, as an indication of character; but deeply significant of habit and power: thus the projecting, full, bead, which enables the smaller birds to see the smallest insect or grain with good in it, gives them much of their bright and often arch expression; while the flattened iris under the beetling brow of the falcons,—projecting, not in frown, but as roof, to shade the eye from interfering skylight,—gives them their apparently threatening and ominous gaze; the iris itself often wide and pale, showing as a lurid saturnine ring under the shadow of the brow plumes.

87. I speak of things that are to be: very assuredly they will be done, some day—not far off, by painters educated as gentlemen, in the strictest sense—working for love and truth, and not for lust and gold. Much has already been done by good and earnest draughtsmen, who

[1] [Compare "The Chough;" below, p. 156.]

yet had not received the higher painter's education, which would have enabled them to see the bird in the greater lights and laws of its form. It is only here and there, by Dürer, Holbein, Carpaccio,[1] or other such men, that we get a living bird rightly drawn;* but we may be greatly thankful for the unspared labour, and attentive skill, with which many illustrations of ornithology have been produced within the last seventy or eighty years. Far beyond rivalship among them, stands Le Vaillant's monograph, or dual-graph, on the Birds of Paradise, and Jays:[2] its plates, exquisitely engraved, and coloured with unwearying care by hand, are insuperable in plume-texture, hue, and action,—spoiled in effect, unhappily, by the vulgar boughs for sustentation. Next, ranks the recently issued history of the birds of Lombardy;[3] the lithographs by Herr Oscar Dressler, superb, but the colouring (chromo-lithotint) poor: and then, the self-taught, but in some qualities greatly to be respected, art of Mr. Gould. Of which, I would fain have spoken with gratitude and admiration in his lifetime;[4] had not I known, that the qualified expressions necessary for true estimate of his published plates, would have caused him more pain, than any general praise could have counteracted or soothed. Without special criticism, and rejoicing in all the pleasure which any of my young pupils may take in his drawing,—only guarding them, once for all, against the error of supposing it exemplary as art,—I use his plates

* The Macaw in Sir Joshua's portrait of the Countess of Derby is a grand example.[5]

---

[1] [For Dürer's wing-drawing, see Vol. VI. p. 247, Vol. XX. p. 105, Vol. XXI. p. 142; and for Carpaccio's birds, Vol. XXIV. pp. 341, 365. With the reference to Holbein here, the passage above (p. 69) must be contrasted.]

[2] [See the reference to the editions of this book in Vol. XXI. p. 228. Ruskin placed several of the plates in the Art Collection at Oxford.]

[3] [For this work see above, § 18, p. 30.]

[4] [He had recently died (1881) when Ruskin wrote this. Some years previously, however, Ruskin had spoken of "Gould's marvellous plates": see *Fors Clavigera*, Letter 51, § 23.]

[5] [This picture was painted in 1779, and is supposed to have been destroyed. It was engraved in mezzotint in 1780 by William Dickinson. Compare Vol. XXII. p. 500.]

henceforward for general reference;[1] finding also that, following Mr. Gould's practical and natural arrangement,[2] I can at once throw together in groups, easily comprehensible by British children, all they are ever likely to see of British or Britain-visitant birds: which I find fall, with frank casting, into these following divisions, not in any important matters varying from the usual ones, and therefore less offensive, I hope, to the normal zoologist than my heresies in botany; while yet they enable me to make what I have to say about our native birds more simply presentable to young minds.*

88. 1. The HAWKS come first, of course, massed under the single Latin term "Falco," and next them,

2. The OWLS second, also of course,—unmistakable, these two tribes, in all types of form, and ways of living.

3. The SWALLOWS I put next these, being connected with the owls by the Goatsucker, and with the falcons by their flight.

4. The PIES next, whose name has a curious double meaning, derived partly from the notion of their being painted or speckled birds; and partly from their being, beyond all others, pecking, or pickaxe-beaked, birds.[3] They include, therefore, the Crows, Jays, and Woodpeckers; historically and practically a most important order of creatures to man. Next which, I take the great company of the smaller birds of the dry land, under these following more arbitrary heads.

5. The SONGSTERS. The Thrush, Lark, Blackbird, and Nightingale, and one or two choristers more. These are

* See the notes on classification, in the Appendix to the volume; published, together with the Preface, simultaneously with this number.[4]

---

[1] [Ruskin had similarly placed many of Gould's plates in his Drawing School at Oxford: see Vol. XXI. p. 228.]

[2] [Explained in the Introduction to his *Birds of Great Britain*, vol. i.]

[3] [Compare the notes on the Pies, now printed from Ruskin's MSS., below, p. 152.]

[4] [See now, below, pp. 133 *seq.*]

connected with the pheasants in their speckledness, and with the pies in pecking; while the nightingale leads down to the smaller groups of familiar birds.

6. The ROBINS, going on into the minor warblers, and the Wrens; the essential character of a Robin being that it should have some front red in its dress somewhere; and the Crossbills being included in the class, partly because they have red in their dress, and partly because I don't know where else to put them.

7. The CREEPERS and TITS—separated chiefly on the ground of their minuteness, and subtle little tricks and graces of movement.

8. The SPARROWS, going on into Buntings and Finches.

9. The PHEASANTS (substituting this specific name for that of Scratchers[1]).

10. The HERONS; for the most part wading and fishing creatures, but leading up to the Stork, and including any long-legged birds that run well, such as the Plovers.

11. The DABCHICKS—the subject of our present chapter.

12. The SWANS and GEESE.

13. The DUCKS.

14. The GULLS.

Of these, I take the Dabchicks first, for three sufficient reasons;—that they give us least trouble,—that they best show what I mean by broad principles of grouping,—and that they are the effective clasp, if not centre, of all the series; since they are the true link between land and water birds. We will look at one or two of their leading examples, before saying more of their position in bird-society. I shall give for the heading of each article, the name which I propose for the bird in English children's schools—*Dame*-schools if possible; a perfectly simple Latin one, and a familiar English one. The varieties of existing nomenclature, will be given in the Appendix, so far as I think them necessary to be known or remembered.

[1] [See above, § 83, p. 75.]

## I

### MERULA FONTIUM. TORRENT-OUZEL[1]

89. There are very few good popular words which do not unite two or more ideas, being founded on one, and catching up others as they go along. Thus I find "dab-chick," to be a corruption of "dip-chick," meaning birds that only dip, and do not dive, or even duck, for any length of time: but in its broader and customary use it takes up the idea of dabbling; and, as a class-name, stands for "dabbling-chick," meaning a bird of small size, that neither wades, nor dives, nor runs, nor swims, nor flies, in a consistent manner; but humorously dabbles, or dips, or flutters, or trips, or plashes, or paddles, and is always doing all manner of odd and delightful things: being also very good-humoured, and in consequence, though graceful, inclined to plumpness;* and though it never waddles, sometimes, for a minute or two, "toddles," and now and then looks more like a ball than a bird. For the most part, being clever, they are also brave, and would be as tame as any other chickens, if we would let them. They are mostly shore birds, living at the edge of irregularly broken water, either streams or sea; and the representative of the whole group with which we will begin is the mysterious little water-ouzel, or "oiselle," properly the water-blackbird,—Buffon's[2] "merle d'eau"—for ouzel is the classic and poetic word for the blackbird, or ouzel-*cock*, "so black of hue," in *Midsummer Night's Dream*.[3] Johnson gives it from the Saxon "osle"; but in Chaucer it must be understood simply as the feminine of oiseau.[4] The bird in question might, however, be more properly called, as Bewick calls it,[5] "water

* Or in French, "embonpoint."

[1] [See Appendix, § 148, p. 141.]
[2] [*The Natural History of Birds*, from the French of Count de Buffon, 9 vols. 1793. For the "merle d'eau," see vol. viii. p. 126.]
[3] [Act iii. sc. 1 (song).]
[4] [See above, § 39, p. 43.]
[5] [*History of British Birds*, 1804, vol. ii. p. 16.]

pyot," or water magpie, for only its back and wings are black,—its head brown, and breast snow white.

90. And now I must, once for all, get over a difficulty in the description of birds' costume. I can always describe the neck-feathers, as such, when birds have any neck to speak of; but when, as the majority of dabchicks, they have not any,—instead of talking of "throat-feathers" and "stomach-feathers," which both seem to me rather ugly words, I shall call the breast feathers the "chemisette," and all below them the "bodice."

I am now able, without incivility, to distinguish the two families of Water-ouzel. Both have white chemisettes, but the common water-ouzel (Cinclus aquaticus of Gould) has a white bodice, and the other a black one, the bird being called therefore, in ugly Greek, "Melanogaster," "black-stomached." The black bodice is Norwegian fashion—the white, English; and I find that in Switzerland there is an intermediate Robin-ouzel, with a red bodice: but the ornithologists are at variance as to his "specific" existence. The chemisette is always white.

91. However dressed, and wherever born, the Ouzel is essentially a mountain-torrent bird, and, Bewick says,[1] may be seen perched on a stone in the midst of a stream, in a continual *dipping* motion, or short curtsey often repeated, while it is watching for its food, which consists of small fishes and insects,—water insects, that is to say, caught mostly at the bottom; many-legged and shrimpy things, according to Gould's plate.[2] The popular tradition that it can walk under the water has been denied by scientific people; but there is no doubt whatever of the fact,—see the authentic evidence of it in the delightful little monograph of the bird published by the Carlisle Naturalists' Society;[3]

[1] [*History of British Birds*, 1804, vol. ii. p. 17.]

[2] [Vol. ii., No. 41.]

[3] [The paper, entitled "With the Dipper," was read to the "Carlisle Scientific Society and Naturalists' Field Club" on March 18, 1879, and is published in the *Transactions* of the Cumberland Scientific Society (with which the other Society was amalgamated) for 1878–1881. The author is Mr. W. Duckworth.]

but how the thing is done nobody but the ouzel knows. Its strong little feet, indeed, have plenty of grip in them, but cannot lay hold of smooth stones, and Mr. Gould himself does not solve the problem. "Some assert that it is done by clinging to the pebbles with its strong claws; others, by considerable exertion and a rapid movement of the wings. Its silky plumage is impervious to wet; and hence when the bird returns to the surface, the pearly drops which roll off into the stream are the only evidence of its recent submersion. It is, indeed, very interesting to observe *this pretty bird walk down a stone, quietly descend into the water*, rise again perhaps at the distance of several yards down the stream, and 'fly'* back to the place it had just left, to perform the same manœuvre the next minute, the silence of the interval broken by its cheerful warbling song."

92. In which, you see, we have the reason for its being called "water-blackbird," being, I think, the only one of the dabchicks that really sings. Some of the others (sandpipers) pipe; and others, the stints, say "stint" in a charming manner; but none of them *sing* except the oiselle. Very singularly, the black-bodiced one seems to like living near manufactories. "The specimen in the Norwich Museum," says Mr. Gould, "is the one mentioned by Mr. Lubbock, in 1845, as 'lately' shot at Hellesdon Mills; and two others are stated by the same author to have been seen at different times by trustworthy observers at Marlingford and Saxthorpe. Of more recent occurrence I may mention a male in my own collection, which was brought to me in the flesh, having been shot in November, 1855, whilst hovering over the river between the foundry bridge and the ferry. It is not a little singular that a bird so accustomed to the clear running streams of the north, and the quiet haunts of the 'silent angler,' should be found, as in this case, almost within the walls of the city, sporting

* "Wing its way" in the ornithological language. I shall take leave usually to substitute the vulgar word "fly," for this poetical phrase.

over a river turbid and discoloured from the neighbouring factories, and with the busy noise of traffic on every side. About the same time that this bird appeared near the city, three others were observed on more than one occasion on the Earlham river, by Mr. Fountaine, of Easton, who is well acquainted with our British birds; but these suddenly disappeared, and were not seen again."[1]

And all will disappear, and never be seen again, but in skeleton, ill-covered with camphorated rags of skin, under the present scientific dispensation; unless some kind-hearted northern squire will let them have the run and the dip of his brooks; and teach the village children to let them alone if they like to wade down to the village.

I am sixty-two,[2] and have passed as much time out of those years by torrent sides as most people. But I have never seen a water-ouzel alive.

## II

### ALLEGRETTA NYMPHÆA. LILY-OUZEL[3]

98. We have got so far, by help of our first example, in the etymology of our entire class, as to rest in the easily memorable root "dab," short for dabble, as the foundation of comprehensive nomenclature. But the earlier (if not Aryan!) root "dip," must be taken good heed to, also, because, as we further study the customs of aquatic chickens, we shall find that they really mass themselves under the three great heads of "Duckers," birds that duck their heads only, and stick up their tails in the air;—"Dippers," birds that take real dips under, but not far down, in shallow water mostly, for things at the bottom, or else to get out of harm's way, staying down about as long as we could ourselves, if we were used to it;—and "Divers," who plunge like stones when they choose,—can go nobody knows how

[1] [Vol. ii., No. 42.]
[2] [This chapter was written, therefore, in 1881.]
[3] [See Appendix, § 149, p. 143.]

deep in the deep sea,—and swim under the water just as comfortably as upon it, and as fast, if not faster.

But although this is clearly the practical and poetical division, we can't make it a scientific one; for the dippers and dabblers are so like each other that we must take them together; and so also the duckers and divers are inseparable in some of their forms: so that, for convenience of classing, we must keep to the still more general rank I have given —dabchick, duck, and gull,—the last being essentially the aerial sea-bird, which *lives* on the wing.

94. But there is yet one more "mode of motion"[1] to be thought of, in the class we are now examining. Several of them ought really to be described, not as dipchicks, but as *trip*chicks; being, as far as I can make out, little in the habit of going under water; but much in the habit of walking or tripping daintily over it, on such raft or float as they may find constructed for them by water-lily or other buoyant leaves. Of these "come and trip it as you come" chicks,—(my emendation of Milton[2] is surely more reasonable than the emendations of commentators as a body, for we do not, any of us, like to see our mistresses "trip it as they *go*")—there are, I find, pictured by Mr. Gould, three "species," called by him, Porzana Minuta, Olivaceous Crake; Porzana Pygmæa, Baillon's Crake;[3] and Porzana Maruetta, Spotted Crake.[4]

Now, in the first place, I find "Porzana" to be indeed Italian for "water-hen," but I can't find its derivation;[5] and in the second place, these little birds are neither water-hens nor moor-hens, nor water-cocks nor moor-cocks; neither can I find, either in Gould, Yarrell, or Bewick, the slightest notice of their voices!—though it is only in implied depreciation of their quality, that we have any business to

[1] [The phrase is Tyndall's: see Vol. XIX. p. 355 *n.*]
[2] [See *L'Allegro*, 33.]
[3] [Called after Emmanuel Baillon, French ornithologist (died at Abbeville, 1802).]
[4] [Nos. 90, 89, and 88 in vol. iv.]
[5] [No derivation is suggested in the Standard Italian Dictionary by Tommaseo and Bellini.]

call them "Crakes," "Croaks," or "Creaks." In the third place, "Olivaceous" is not a translation of "Minuta," nor "Baillon's" of "Pygmæa," nor "spotted" of "Maruetta"; which last is another of the words that mean nothing in any language that I know of, though the French have adopted it as "Marouette." And in the fourth place, I can't make out any difference, either in text or picture, between Mr. Baillon's Crake, and the "minute" one, except that the minute one is the bigger, and has fewer white marks in the centre of the back.

95. For our purposes, therefore, I mean to call all the three varieties neither Crake nor Porzan, but "Allegretta," which will at once remind us of their motion; the larger one, nine inches long, I find called always Spotted Crake, so that shall be "Allegretta Maculata," Spotty Allegret; and the two little ones shall be, one, the Tiny Allegret, and the other the Starry Allegret (Allegretta Minuta, and Allegretta Stellaris); all the three varieties being generally thought of by the plain English name I have given at the head of this section, "Lily-Ouzel" (see, in § 7, page 22, the explanation of my system of dual epithet, and its limitations). I note, briefly, what may be properly considered distinctive in the three kinds.

### IIA. ALLEGRETTA NYMPHÆA, MACULATA. SPOTTED ALLEGRET[1]

96. Water-Crake or "Skitty" of Bewick,—French, "Poule d'eau Marouette" (we may perhaps take Marouette as euphonious for Maculata, but I wish I knew what it meant);—though so light of foot, flies heavily; and, when compelled to take wing, merely passes over the tops of the reeds to some place of security a short distance off. (Gould.[2]) The body is "in all these Rails *compressed*"

[1] [See Appendix, § 149, p. 143.]

[2] [Once an extensive piece of water, north-west of Ramsey; an Act of Parliament was passed for its reclamation in 1844, and it is now arable land. For another reference to it, see *Proserpina* (below, p. 431).]

(Yarrell,[1]—he means laterally thin), which enables them to make their way through dense herbage with facility. I can't find anything clear about its country, except that it "occasionally visits" Sweden in summer, and Smyrna in winter, and that it has been found in Corfu, Sicily, Crete, —Whittlesea Mere,[2]—and Yarley Fen;—in marshes always, wherever it is (nothing said of its behaviour on ice); and not generally found farther north than Cumberland. Its food is rather nasty—water-slugs and the like,—but it is itself as fat as an ortolan, "almost melts in the *hand*." (Gould.) Its own colour, brown spotted with white; "the spots on the wing coverts surrounded with black, which gives them a studded or pearly appearance." (Bewick,—he means by "pearly," rounded or projecting.) Hence my specific epithet. Its young are of the liveliest black, "little balls of black glistening down," beautifully put by Mr. Gould among the white water Crowfoot (Ranunculus Aquatilis), looking like little ducklings in mourning. "Its nest is made of rushes and other buoyant materials matted together, so as to float on, and rise or fall with, the ebbing or flowing of the water like a boat; and to prevent its being carried away, it is moored or fastened to a reed." (Bewick.)

### IIB. ALLEGRETTA NYMPHÆA, STELLARIS.
### STARRY ALLEGRET[3]

97. Called "Stellaris" by Temminck.[4]—I do not find why, but it is by much the brightest in colour of the three, and may be thought of as the star of them. Gould says it is the least, also, and calls it the "Pigmy"; but we can't keep that name without confusing it with the "Minuta." "Baillon's Crake" seems the most commonly accepted title,—as the worst possible. Both this, and the

[1] [Vol. iv., No. 88.]
[2] [Vol. iii. p. 113 (3rd ed.).]
[3] [See, again, Appendix, § 149, p. 143.]
[4] [*Manuel d'Ornithologie*, by C. J. Temminck, 2nd ed., Paris, 1820, vol. ii. p. 693.]

more quietly toned Tiny, in Mr. Gould's delightful plates of them, have softly brown backs, exquisitely ermined by black markings at the root of each feather, following into series of small waves, like little breakers on sand. They have lovely grey chemisettes, striped grey bodices, and green bills and feet; a little orange stain at the root of the green bill, and the bright red iris of the eye have wonderful effect in warming the colour of the whole bird: and with beautiful fancy Mr. Gould has put the Stellaris among yellow water-lilies to set off its grey; and a yellow butterfly with blue and red spots, and black-speckled wings (Papilio Machaon), to harmonize both.[1] It is just as if the flower were gradually turning into the bird. Examples of the Starry Allegret *have* been "obtained"—in the British Islands. It is said to be numerous, unobtained, in India, China, Japan, Persia, Greece, North Africa, Italy, and France. I have never heard of anybody's seeing it, however.

### IIc. ALLEGRETTA NYMPHÆA, MINUTA. TINY ALLEGRET[2]

98. "Tiny Allegret,"—Yarrell's "Little Crake" (but see names in Appendix).[3] It is a little more rosy than "Stellaris" in the grey of its neck, passing into brown; and Mr. Gould has put it with a pink water plant, which harmonizes with it to the bird's advantage; while the tiny creature stands on the bent leaf of a reed, and scarcely bends it more! "It runs with rapidity over broken reeds, and moves gracefully, raising and displaying its tail at every step."[4] It has so very small a tail to display, however, that I should hardly think the display was worth while. "It is very cunning, and especially noticeable for the subtlety with which it wearies the dog of the sportsman

[1] [No. 89 in vol. iv.]
[2] [See Appendix, § 149, p. 144.]
[3] [*A History of British Birds*, by William Yarrell, 4 vols., 4th ed., 1882–1884, vol. iii. p. 148.]
[4] [No. 90 in vol. iv.]

by executing a thousand evolutions with surprising celerity; whence comes the trivial name of 'kill-dog' bestowed upon it in some localities. Pursued to extremity, it casts itself into the water, swims with ease, and dives at the moment its enemy is about to seize it; or it conceals itself in a tuft of reeds or a bush, and by this means often escapes with impunity. It loves to breed among the reeds, and in long and thick grass, frequently in small companies of its own species, or of the Stellaris. The female lays her eggs on an inartificially constructed platform of decayed leaves or stalks of marsh plants, slightly elevated above the water." How elevated, I cannot find proper account,—that is to say, whether it is hung to the stems of growing reeds, or built on hillocks of soil, but the bird is always liable to have its nest overflowed by floods. The full-grown bird is dressed in an exquisite perfection of barred bodice, spotted chemisette, and waved feathers edged with grey on the back.

99. The reader will please recollect these three Allegrets as the second group of the dab- or dabble-chicks; and, while the water-ouzel is a mountain and torrent bird, these inhabit exclusively flat lands and calm water, belonging properly to temperate, inclining to warm, climates, and able to gladden for us—as their name now given implies—many scenes and places otherwise little enlivened; and to make the very gnats of them profitable to us, were we wise enough. Dainty and delightful creatures in all their ways,—voice only dubitable, but I hope not a shriek or a squeak;—and there seems to be no reason whatever why half our fen lands should not be turned into beds of white water-lilies and golden ducks, with jetty ducklings, to the great comfort of English souls.*

* Compare Bishop Stanley's[1] account of the larger tropical "Jacana," p. 311. "One species is often tamed, and from its being a resolute enemy to birds of prey, the inhabitants of the countries where it is found"

[1] [*A Familiar History of Birds*, by Edward Stanley, Lord Bishop of Norwich, 4th ed., 1848, p. 332.]

## III.

### TREPIDA STAGNARUM. LITTLE GREBE[1]

100. The two birds—Torrent-ouzel, and Lily-ouzel,—which we have been just describing, agree, you will observe, in delicate and singular use of their feet in the water; the torrent-ouzel holding itself mysteriously at the bottom; and the lily-ouzel, less mysteriously, but as skilfully, on the top (for I forgot to note, respecting this raft-walking, that the bird, however light, must be always careful not to tread on the edges of leaves, but in the middle, or, rather, as nearly as may be where they are set on the stalk; it would go in at once if it trod on the edges). But both the birds have the foot which is really characteristic of land, not water-birds; and especially of those land species that run well. Of the real action of the toes, either in running, or hopping, nothing is told us by the anatomists—(compare lecture on Robin, § 26, p. 34); but I hope before long to get at some of the facts respecting the greater flexibility of the gripping and climbing feet, and elasticity of running ones; and to draw up something like a properly graduated scale of the length of the toes in proportion to that of the body.[2]

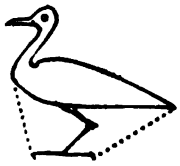


Fig. 12

And, for one question, relative to this—the balance of a bird *standing*, not gripping—is to be thought of. Taking a typical profile of bird-form in its abstract, with beak, belly, and foot, horizontal (Fig. 12), the security of the standing (supposing atomic weight equal through the bird's body, and the *will*, in the ankle, of

(which be they?) "rear it as a protector for their fowls, as it not only feeds with them, but accompanies them into the fields, and brings them back in the evening!"

---

[1] [See Appendix, § 150, p. 144.]
[2] [This, however, was not done.]

iron) is the same as of an inverted cone, between the dotted lines from the extremities of the foot to those of the body; and, of course, with a little grip of the foot or hind claw, the bird can be safe in almost any position it likes. Nevertheless, when the feet are as small in proportion as the Torrent-ouzel's, I greatly doubt the possibility of such a balance as Bewick has given it (Fig. 18 *a*).[1] Gould's[2] of the black-bodiced Ouzel (Fig. 18 *b*) is, I imagine, right. Bewick was infallible in plume texture, and expression either of the features of animals, or of any action that had meaning in it; but he was singularly careless of indifferent points in geometry or perspective; and even loses character in his water-birds, by making them always swim on the top of the water.

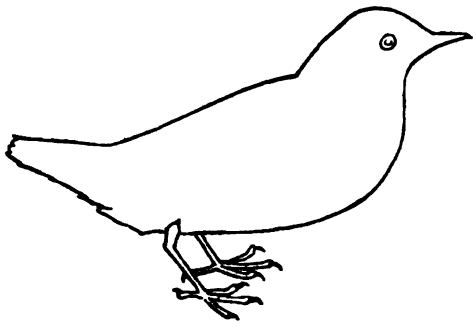


Fig. 18 *a*

101. But, whatever their balance of body, or use of foot, the two birds just examined are, as I said, essentially connected with the running land birds, or broadly, the Plovers; and with the Sand-runners, or (from their cry) Sand-pipers, which Mr. Gould[3] evidently associates mentally with the Plovers, in his description of the plumage of the Dunlin;[4] while he gives to them in his plates of that bird—the little

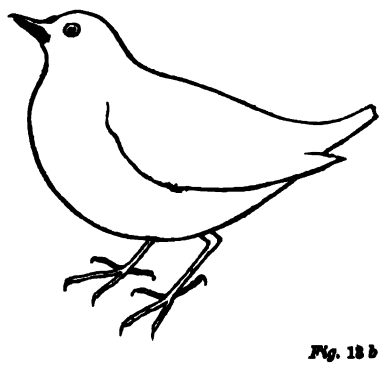


Fig. 18 *b*

[1] [Vol. ii. p. 16.]
[2] [No. 42 in vol. ii.]
[3] [Sandpipers are Nos. 56, 57, 59, etc., in vol. iv.; the Dunlin, Nos. 69 and 70; the Little Stint, No. 72.]
[4] [The Red-backed Sandpiper.]

Stint, and common Sandpiper—most subtle action with their fine feet,—thread-fine, almost, in the toes; requiring us, it seems to me, to consider them as entirely land-birds, however fond of the wave margins. But the next real water-ouzel we come to, belongs to a group with feet like little horse-chestnut leaves; each toe having its separate lobes of web. Why separated, I cannot yet make out, but the bird swims, or even dives, on occasion, with dexterity and force. These lobe-footed birds consist first of the Grebes, which are connected with fresh-water ducks; and, secondly, of the Phalaropes, which are a sort of seagulls. No bird which is not properly web-footed has any business to think itself either true duck or true gull; but as, both in size and habit of life, the larger grebes and phalaropes are entirely aquatic and marine, I shall take out of them into my class of dabchicks, only those which are literally dabblers in habit, and chickens in size. And of the Grebes, therefore, only the one commonly known as the Dabchick, the "Little Grebe," "Colymbus Minutus" (Minute Diver), of Linnæus. A summary word or two, first, respecting the Grebe family, will be useful.

102. Grebe, properly, I suppose, Grèbe, from the French, is not in Johnson, nor do any of my books tell me what it means.[1] I retain it, however, as being short, not ugly, and well established in two languages. We may think of it as formed from gré, and meaning "a nice bird." The specialities of the whole class, easily remembered, are, first, that they have chestnut-leaf feet; secondly, that their legs are serrated behind with a double row of notches—(why?); thirdly, that they have no tails; fourthly, that they have, most of them, very fine and very comic crests, tufts, tippets, and other variously applied appendages to their heads and chins, so that some are called "crested," some "eared," some "tippeted," and so on; but the least of them, our proper Dabchick, displays no absurdity of this sort, and I

[1] [Still, in Dr. Murray's *New English Dictionary*, said to be "of unknown origin."]

have the less scruple in distinguishing it from the others. I find, further, in Stanley's classes,[1] the Grebes placed among the short-winged birds, and made to include all the divers; but he does not say how short their wings are; and his grouping them with guillemots and puffins is entirely absurd, all their ways and looks, and abodes, being those of ducks. We can say no more of them as a family, accordingly, until we know what a duck is;—and I go on to the little pet of them,[2] whose ways are more entirely its own.

108. Strangely, the most interesting fact (if *fact* it be) that it builds a floating nest, gains scarcely more than chance notice from its historians. Here is Mr. Gould's account of it:[3] "The materials composing this raft or nest are weeds and aquatic plants carefully heaped together in a rounded form; it is very large at the base, and is so constantly added to, that a considerable portion of it becomes submerged; at the same time it is sufficiently buoyant to admit of its saucer-like hollow top being always above the surface. In this wet depression five or six eggs are laid. The bird, always most alert, is still more so now, and scarcely ever admits of a near examination of the nest-making, or of a view of the eggs. In favourable situations, however, and with the aid of a telescope, the process may be watched; and it is not a little interesting to notice with what remarkable quickness the dabchick scratches the weeds over her eggs with her feet, when she perceives herself observed, so as not to lead even to the suspicion that any were deposited on the ill-shapen floating mass. This work of an instant displays as much skill in deception as can well be imagined."

104. It is still left to question, first, what is meant by a wet depression?—does the bird actually sit in the water, and are the eggs under it? and, if not, how is the water

[1] [*A Familiar History of Birds*, 4th ed., pp. 23, 450.]
[2] [*i.e.*, the Little Grebe.]
[3] [No. 42 in vol. v.]

they had evidently been choked in the act of swallowing them. That it is especially fond of insects is shown by the great activity it displays, when in captivity, in capturing house-flies and other diptera. Those who have visited Paris will probably have seen the grebes in the window of the restaurateur in the Rue de Rivoli. For years have a pair of these birds been living, apparently in the greatest enjoyment, within the glass window, attracting the admiration of all the passers-by. The extreme agility with which they sailed round their little prison, or scrambled over the half-submerged piece of rock for a fly, was very remarkable. That no bird can be more easily kept in a state of confinement is certain."

108. This question about its food is closely connected with that of its diving. So far as I understand Mr. Morris, it dives only when disturbed, and to escape,—remaining under water, however, if need be, an almost incredible time, and swimming underneath it to great distances. Here we have, if we would only think of it, the same question as that about the water-ouzel,[1] how it *keeps down;* and we must now note a few general points about diving birds altogether.

It is easy to understand how the properly so-called divers can plunge with impetus to great depths, or keep themselves at the bottom by continued strokes of the webbed feet; but neither how the ouzel walks at the bottom, if it be specifically lighter than the water, nor how a bird can swim horizontally under the surface; at least it is not enough explained that the action must be always that of oblique diving, the bird regulating the stroke according to the upward pressure of the water at different depths.

109. But there are many other points needing elucidation. It is said (and beautifully insisted on, by Michelet[2]) that great spaces in the bones of birds that pass most of their lives in flight are filled with air: presumably the

[1] [See above, §§ 89–92, p. 83.]
[2] [At p. 86 of the English translation of *The Bird.*]

bones of the divers are made comparatively solid, or it is even conceivable—if conceptions or suppositions were of any use,—that the deep divers may take in water, to help themselves to sink. The enormous depths at which they have been caught, according to report, cannot be reached by any mere effort of strength, if the body remained as buoyant as it evidently is on the surface. The strength of the wing must, however, be enormous, for the great northern diver is described as swimming under water "as it were with the velocity of an arrow in the air" (Yarrell, vol. iii., page 431); or to keep to more measured fact, Sir William Jardine says, "I have pursued this bird in a Newhaven fishing-boat with four sturdy rowers, and notwithstanding it was kept almost constantly under water by firing as soon as it appeared, the boat could not succeed in making one yard upon it" (*ibid.*, p. 432).

110. But this is followed by the amazing statement of Mr. Robert Dunn (*ibid.*, p. 433), that in the act of diving it does not appear to make the least exertion, but sinks gradually under the surface, without throwing itself forward, the head being the last part that disappears. I am not fond of the word "impossible," but I think I am safe in saying that according to the laws of nature no buoyant body can sink merely by an act of volition; and that it must pull itself down by some hitherto unconceived action of the feet, which in this bird are immensely broad and strong, and so flat that it cannot walk with them, any more than we could with two flat boards a yard square tied to our feet; but, when it is caught on land, shoves its body along upon the ground, like a seal, by jerks. All these diving motions are executed in a more delicate but quite as wonderful way by the dabchick,—more wonderful indeed it may be said, because it has only the divided or chestnut-leaf-like foot, to strike with. We shall understand it perhaps a little better after tracing, in a future talk, the history of its relations among the smaller seagulls;[1] meantime,

[1] [A reference to the intended, but unwritten, lecture on the Seagull; see above, p. 11.]

in quitting the little dainty creature, I must plead for a daintier Latin name than it has now—"Podiceps." No one seems to have the least idea what that means; and "Colymbus," diver, must be kept for the great Northern Diver and his deep-sea relatives, far removed from our little living ripple-line of the pools. I can't think of any one pretty enough; but for the present "Trepida" may serve; and perhaps be applied, not improperly, to all the Grebes, with reference to their subtle and instant escape from any sudden danger. (See Stanley, p. 419.) "It requires all the address of a keen sportsman to get within shot," and when he does, the bird may still be too shrewd for him. "I fired at the distance of thirty yards; my gun went quick as lightning, but the grebe went quicker, and scrambling over, out of sight, came up again in a few seconds perfectly unhurt."

I think, therefore, that unless I receive some better suggestion, "Trepida Stagnarum" may be the sufficiently intelligible Latin renaming of our easily startled favourite.

## IV.

### TITANIA ARCTICA. ARCTIC FAIRY[1]

111. I must first get quit of the confusion of names for this bird. Linnæus, in the *Fauna Suecica*, p. 64, calls it "Tringa Lobata," but afterwards "Northern Tringa"; and his editor, Gmelin, "Dark Tringa."[2] Other people agree to call it a "phalarope," but some of them "northern" phalarope, some, the "dark" phalarope; some, the "ashy" phalarope; some, the "disposed to be ashy" phalarope; some, the "red-necked" phalarope; and some, "Mr. Williams's phalarope; finally, Cuvier[3] calls it a "Lobipes," and Mr. Gould,

[1] [See Appendix, § 151, p. 146.]

[2] [For other references to the *Fauna Suecica*, see above, pp. 32, 33. For "Tringa Hyberborea" and "Tringa Fusca," see Linnæus's *Systema Naturæ*, edited by J. F. Gmelin, Leipsig, 1788, vol. i. pt. ii. pp. 675, 676.]

[3] [See *The Animal Kingdom*, by the Baron Cuvier, London, 1829–1835, vol. viii. p. 391.]

in English, "red-necked phalarope."[1] Few people are likely to know what "Phalarope" means,* and I believe nobody knows what "Tringa" means; and as, also, nobody ever sees it, the little bird being obliged to live in Orkney, Greenland, Norway, and Lapland, out of human creatures' way, I shall myself call it the Arctic Fairy. It would come south if we would let it, but of course Mr. Bond says,[2] "The first specimen I ever had was shot by a friend of mine in September, 1842, near Southend, Essex, where he saw the phalarope swimming on the water, like a little duck, about a mile from land; not knowing what it was, he shot it, and kindly brought it to me." Another was shot while running between the metals of the Great Eastern Railway, near the Stratford station, early in June, 1852; and on the Norfolk coast, four others have been killed during the last fifteen years; and the birds' visits, thus, satisfactorily, put a stop to.[3] I can therefore study it only in Mr. Gould's drawing, on consulting which, I find the bird to be simply a sea dabchick,—brown stripes on the back, and all; but the webs of the feet a little finer, and in its habits it is more like the Lily-ouzel, according to the following report of Mr. St. John:[4] "The red-necked phalarope is certainly the most beautiful little wader of my acquaintance. There were a pair of them, male and female, feeding near the loch, in a little pool which was covered with weeds of different kinds. Nothing could be more graceful than the movements of these two little birds, as they swam about in search of insects, etc. Sometimes *they ran lightly on the broad leaves of the water-lily which served them for a raft*, and entirely kept them out of the water. Though not

* The terminal "pe" is short for pus (pous!) and "phalero," from phalera, fringes—"Fringe-foot" (Morris).[5]

[1] [Vol. iv., No. 83.]
[2] [Quoted in Gould, No. 83, vol. iv.]
[3] [Again quoted in Gould, *ibid.*]
[4] [Again quoted from Gould, *ibid.*]
[5] [Vol. v. p. 52.]

exactly web-footed, the phalarope swims with the greatest ease. The attachment of these two birds to each other seemed very great: whenever in their search for food they wandered so far apart as to be hidden by the intervening weeds, the male bird stopped feeding suddenly, and, looking round, uttered a low and musical call of inquiry, which was immediately answered by the female in a different note, but perfectly expressive of her answer, which one might suppose to be to the purport that she was at hand and quite safe; on hearing her, the male immediately recommenced feeding, but at the same time making his way towards her; she also flew to meet him; they then joined company for a moment or two, and, after a few little notes of endearment, turned off again in different directions. This scene was repeated a dozen times while I was watching them. They seemed to have not the slightest fear of me, for frequently they came to within a yard of where I was sitting, and after looking up they continued catching the small water-insects, etc., on the weeds, without minding my presence in the least." What reward the birds got for this gentle behaviour, we learn from the sentence following after the next two lines, containing the extremely valuable contribution to their natural history, that "on dissecting the female we found two eggs in her."

112. All other accounts concur in expressing (with as much admiration as is possible to naturalists) the kindly and frank disposition of this bird; which for the rest is almost a central type of all bird power with elf gifts added: it flies like a lark, trips on water-lily leaves like a fairy, swims like a duck, and roves like a seagull, having been seen sixty miles from land: and, finally, though living chiefly in Lapland and Iceland, and other such northern countries, it has been seen serenely swimming and catching flies in the hot water of the geysers, in which a man could not bear his hand.

And no less harmoniously than in report of the extreme tameness, grace, and affectionateness of this bird do

sportsmen agree also in the treatment and appreciation of these qualities. Thus says Mr. Salmon:[1] "Although we shot two pairs, those that were swimming about did not take the least notice of the report of the gun, and they seemed to be much attached to each other; for when one of them flew to a short distance, the other directly followed; and while I held a wounded female in my hand, its mate came and fluttered before my face." (Compare the scene between Irma and Hector, at page 398 of the May number of *Aunt Judy's Magazine*.[2]) And, again, says Mr. Wolley:[3] "The bird is extremely tame, swimming about my India-rubber boat so near that I could almost catch it in my hand; I have seen it even, when far from its nest, struck at many times with an oar before it flew away." In its domestic habits also the creature seems as exemplary as, in its social habits, it is frank; for on the approach of danger to her nestlings, the hen uses all the careful subtleties of the most cunning land birds, "spreading her wings, and counterfeiting lameness, for the purpose of deluding the intruder; and after leading the enemy from her young, she takes wing and flies to a great height, at the same time displaying a peculiar action of the wings; then descending with great velocity, and making simultaneously a noise with her wings. On her return to her young, she uses a particular cry for the purpose of gathering them together. As soon as she has collected them, she covers them with her wings, like the domestic hen."

118. I cannot quite make out the limits of the fairy's migrations; but it is said by Morris[4] to "occur" in France, Holland, Germany, Italy, and Switzerland. I find that one was what sportsmen call "procured" near York, in full summer dress; and another killed at Rottingdean, swimming in a pond in the middle of the village, in the company of some ducks. At Scarborough, Louth, and

[1] [Quoted in Gould, No. 83, vol. iv.]
[2] [Volume for 1881; a passage from a story called "Hector," by F. L. Shaw.]
[3] [Again quoted in Gould, *ibid.*]
[4] [Vol. v. p. 58.]

Shoreham, it has also been captured or shot, and has been "found" building nests in Sutherland: and, on the whole, it seems that here is a sort of petrel-partridge, and duckling-dove, and diving-lark, with every possible grace and faculty that bird can have, in body and soul; ready, at least in summer, to swim on our village ponds, or wait at our railway stations, and make the wild north-eastern coasts of Scotland gay with its dancing flocks upon the foam; were it not that the idle cockneys, and pot-headed squires fresh out of Parliament, stand as it were on guard all round the island, spluttering small-shot at it, striking at it with oars, cutting it open to find how many eggs there are inside, and, in fine, sending it for refuge into the hot water of Hecla, and any manner of stormy solitude that it can still find for itself and its amber nestlings. I have never seen one, nor I suppose ever shall see, but hear of some of my friends sunning themselves at midnight about the North Cape, of whom, if any one will bring me a couple of Arctic fairies in a basket, I think I can pledge our own Squire's and Squire's lady's faith,[1] for the pair's getting some peace, if they choose to take it, and as many water-lily leaves as they can trip upon, on the tarns of Monk Coniston.

### IVB. TITANIA INCONSTANS. CHANGEFUL FAIRY[2]

*Phalaropus Fulicarius.* (*Coot-like Phalarope—Gould*[3])

114. I think the epithet "changeful" prettier, and, until we know what a coot *is* like, more descriptive, than "coot-like"; the bird having red plumage in summer, and grey in winter, while the coot is always black. It is a little less pretty and less amiable than its sister fairy; otherwise scarcely to be thought of but as a variety, both of them

[1] [Mr. and Mrs. Victor Marshall of Monk Coniston: see Vol. XXIII. p. xxi.]
[2] [See Appendix, § 151, p. 147.]
[3] [Vol. iv., No. 81.]

being distinguished from the coot, not only by colour, but by their smaller size;—(they eight inches long, it sixteen)—and by the slender beaks, the coot having a thick one, half-way to a puffin's.

And here, once for all,—for I see I have taken no note yet of the beaks or bills of my dabchicks,—I will at once arrange a formula of the order of questions which it will be proper to ask, and get answered, concerning any bird,[1] in the same order always, so that we shall never miss anything that we ought to think of. And I find these questions will naturally and easily fall into the following twelve:—

1. Country, and scope of migration.
2. Food.
3. Form and flight.
4. Foot.
5. Beak and eye.
6. Voice and ear.
7. Temper.
8. Nest.
9. Eggs.
10. Brood.
11. Feathers.
12. Uses in the world.

It may be thought that I have forced—and not fallen into—my number 12, by packing the faculties of sight and hearing into bye corners. But the expression of a bird's head depends on the relation of eye to beak, as the getting of its food depends on their practical alliance of power; and the question, for instance, whether peacocks and parrots have musical ears, seems to me not properly debateable unless with due respect to the quality of their voices. It is curious, considering how much, one way or another, we are amused or pleased by the chatter and song of birds, that you will scarcely find in any ornithic manual more

[1] [That is, other than questions about its mythology; see above, p. 40.]

than a sentence, if so much, about their hearing; and I have not myself, at this moment, the least idea where a nightingale's ears are! But see Appendix, p. 149.

I retain, therefore, my dodecahedric form of catechism as sufficiently clear; and without binding myself to follow the order of it in strictness, if there be motive for discursory remark, it will certainly prevent my leaving any bird insufficiently distinguished, and enable me to arrange the collected statements about it in the most easily compared order.

115. We will try it at once on this second variety of the Titania, of which I find nothing of much interest in my books, and have nothing discursive myself to say.

(1.) Country. Arctic mostly; seen off Greenland, in lat. 68°, swimming among icebergs three or four miles from shore. Abundant in Siberia, and as far south as the Caspian. Migratory in Europe as far as Italy, yet always rare. (Do a few only, more intelligently curious than the rest, or for the sake of their health, travel?)

(2.) Food. Small thin-skinned crustacea, and aquatic surface-insects.

(3.) Form and flight. Stout, for a sea-bird; and they don't care to fly, preferring to *swim* out of danger. Body 7 to 8 inches long; wings, from carpal joint to end, $4\frac{3}{4}$,—say 5. These quarters of inches, are absurd pretences to generalize what varies in every bird. 8 inches long, by 10 across the wings open, is near enough. In future, the brief notification $8 \times 10$, $5 \times 7$, or the like, will enough express a bird's inches, unless it possess decorative appendage of tail, which must be noted separately.

(4.) Foot. Chestnut-leaved in front toes, the lobes slightly serrated on the edges. Hind toe without membrane. Colour of foot, always black.

(5.) Beak. Long, slender, straight. (How long? Drawn as about a fifth of the bird's length—say an inch, or a little over.) Upper mandible slightly curved down at the point. In Titania arctica, the beak is longer and more slender.

(6.) Voice. A sharp, short cry, not conceived by me enough to spell any likeness of it.

(7.) Temper. Gentle, passing into stupid (it seems to me); one, in meditative travel, lets itself be knocked down by a gardener with his spade.

(8.) Nest. Little said of it, the bird breeding chiefly in the North. Among marshes, it is of weeds and grass; but among icebergs, of what?

(9.) Eggs. Pear-shape; narrow ends together in nest; never more than four.

(10.) Brood. No account of.

(11.) Feathers. Mostly grey, passing into brown in summer, varied with white on margin. Reddish chestnut or bay bodice—well oiled or varnished.

(12.) Uses. Fortunately, at present, unknown.

## V

### RALLUS AQUATICUS. WATER-RAIL[1]

116. Thus far, we have got for representatives of our dabchick group, eight species of little birds—namely, two Torrent-ouzels, three Lily-ouzels, one Grebe, and two Titanias. And these we associate, observe, not for any specialty of feature in them, but for common character, habit, and size; so that, if perchance a child playing by any stream, or on the sea-sands, perceives a companionable bird dabbling in an equally childish and pleasant manner, he may not have to look through half-a-dozen volumes of ornithology to find it; but may be pretty sure it has been one of these eight. And having once fastened the characters of these well in his mind, he may with ease remember that the little grebe is the least of a family of chestnut-leaf-footed, and sharp-billed creatures, which yet in size, colour, and diving power, go necessarily among Ducks, and cannot be classed with Dabblers; though it must be always

[1] [See Appendix, § 152, p. 147.]

as distinctly kept in mind that a duck *proper* has a flat beak, and a fully webbed foot.

Again, he may recollect that with these leaf-footed ducks of the calm and fresh waters, must be associated the leaf-footed or fringe-footed ducks of the sea;—"phalaropes," which by their short wings connect themselves with many clumsy marine creatures, on their way to become seals instead of birds; and that I have kept the two little Titanias out of this class, not merely for their niceness, but because they are not short-winged in any vulgar degree, but seem to have wings about as long as a sandpiper's;—and indeed I had put the purple sandpiper, Arquatella maritima, with them, in my own folio;[1] only as the Arquatella's feet are not chestnutty, she had better go with her own kind in our notes on them.

117. But there are yet two birds, which I think well to put with our eight dabchicks, though they are much larger than any of them,—partly because of their disposition, and partly because of their plumage,—the water-rail, and water-hen. Modern science, with instinctive horror of all that is pretty to see, or easy to remember, entirely rejects the plumage, as any element or noticeable condition of bird-kinds; nor have I ever yet tried to make it one myself; yet there are certain qualities of downiness in ducks, fluffiness in owls, spottiness in thrushes, patchiness in pies, bronzed or rusty lustre in cocks, and pearly iridescence in doves, which I believe may be aptly brought into connection with other defining characters; and when we find an entirely similar disposition of plumage, and nearly the same form, in two birds, I do not think that *mere* difference in size should far separate them.

Bewick,[2] accordingly, calls the water-rail the "Brook-ouzel," and puts it between the little crake and the water-ouzel; but he does not say a word of its living by brooks,

[1] [Presumably Ruskin (as was his wont) had cut up various books on birds, arranging the plates in portfolios.]

[2] [Vol. ii. p. 13.]

—only "in low wet places." Buffon, however, takes it with the land-rail;[1] Gould[2] and Yarrell[3] put it between the little crake and water-hen. Gould's description of it is by no means clear to me:—he first says it is, in action, as much "like a rat as a bird"; then that it "bounds like a ball" (before the nose of the spaniel); and lastly, in the next sentence, speaks of it as "this *lath*-like bird"! It is as large as a bantam, but can run, like the Allegretta, on floating leaves; itself, weighing about four ounces and a half (Bewick[4]), and rarely uses the wing, flying very slowly. I imagine the "lath-like" must mean, like the more frequent epithet "compressed,"[5] that the bird's body is vertically thin, so as to go easily between close reeds.

118. We will try our twelve questions again.

(1.) Country. Equally numerous in every part of Europe, in Africa, India, China, and Japan; yet hardly anybody seems to have seen it. Living, however, "near the perennial fountains" (wherever those may be;—it sounds like the Garden of Eden!) "during the greater part of the winter, the birds pass Malta in spring and autumn, and have been seen fifty leagues at sea off the coast of Portugal" (Buffon[6]); but where coming from, or going to, is not told. Tunis is the most southerly place named by Yarrell.[7]

(2.) Food. Anything small enough to be swallowed, that lives in mud or water.

(3.) Form and flight. I am puzzled, as aforesaid, between its likeness to a ball, and a lath. Flies heavily and unwillingly, hanging its legs down.

(4.) Foot. Long-toed and flexile.

(5.) Beak. Sharp and strong, some inch and a half long,

[1] [*Œuvres Complètes de Buffon* (in the *Panthéon Littéraire*), vol. v. p. 372.]
[2] [*Birds of Great Britain*, vol. iv., No. 86 (Rallus Aquaticus).]
[3] [Vol. iii. p. 159 (4th ed.).]
[4] [Vol. ii. p. 13.]
[5] [See above, p. 87.]
[6] [Vol. v. p. 372 (vol. viii. p. 145 in the English edition).]
[7] [Vol. iii. p. 128 (3rd ed.).]

showing distinctly the scimitar-curve of a gull's, near the point.

(6.) Voice. No account of.

(7.) Temper. Quite easily tameable, though naturally shy. Feeds out of the hand in a day or two, if fed regularly in confinement.

(8.) Nest. "Slight, of leaves and strips of flags" (Gould);[1] "of sedge and grass, rarely found" (Yarrell[2]). Size not told.

(9.) Eggs. Eight or nine! cream-white, with rosy yolk!! rather larger than a blackbird's!!!

(10.) Brood. Velvet black, with white bills; hunting with the utmost activity from the minute they are hatched.

(11.) Feathers. Brown on the back, a beautiful warm ash grey on the breast, and under the wings transverse stripes of very dark grey and white. The disposition of pattern is almost exactly the same as in the Allegretta.

(12.) Uses. By many thought delicious eating. (Bewick.[3]) The fact is, or seems to me, that this entire group of marsh birds is meant to become to us the domestic poultry of marshy land; and I imagine that by proper irrigation and care, many districts of otherwise useless bog and sand, might be made more profitable to us than many fishing-grounds.

## VI

### PULLA AQUATICA. WATER-HEN[4]

*(Gallinula Chloropus.—Pennant, Bewick, Gould, and Yarrell)*

119. "Green-footed little cock, or hen," that is to say, in English; only observe, if you call the Fringe-foot a Phalarope, you ought in consistency to call the Green-foot a Chlorope. Their feet are not only notable for greenness,

[1] [Vol. iv. No. 86.]
[2] [Vol. iii. p. 127 (3rd ed.).]
[3] [Vol. ii. p. 15.]
[4] [See Appendix, § 153, p. 148.]

but for size: they are very ugly, having the awkward and ill-used look of the feet of Scratchers, while a trace of beginning membrane connects them with the fringe-foots.

Their proper name would be Marsh-cock, which would enough distinguish them from the true Moor-cock or Black-cock. "Moat-cock" would be prettier, and characteristic; for in the old English days they used to live much in the moats of manor-houses; mine is the name nearest to the familiar one; only note there is no proper feminine of "pullus," and I use the adjective "pulla" to express the dark colour.

It is a dark-*brown* bird, according to the coloured pictures—iron *grey*, Buffon says,[1] with white stripes of little order on the bodice, clumsy feet and bill, but makes up for all ungainliness by its gentle and intelligent mind; and seems meant for a useful possession to mankind all over the world, for it lives in Siberia and New Zealand; in Senegal and Jamaica; in Scotland, Switzerland, and Prussia; in Corfu, Crete, and Trebizond; in Canada, and at the Cape. I find no account of its migrations, and one would think that a bird which usually flies "dip, dip, dipping with its toes, and leaving a track along the water like that of a stone at 'ducks and drakes'" (Yarrell[2]), would not willingly adventure itself on the Atlantic. It must have a kind of human facility in adapting itself to climate, as it has human domesticity of temper, with curious fineness of sagacity and sympathies in taste. A family of them, petted by a clergyman's wife, were constantly adding materials to their nest, and "made real havoc in the flower-garden,—for though straw and leaves are their chief ingredients, they seem to have an eye for beauty, and the old hen has been seen surrounded with a brilliant wreath of scarlet anemones." Thus Bishop Stanley,[3] whose account of the bird is full of interesting particulars. This æsthetic

[1] [*Œuvres Complètes*, vol. v. p. 375.]
[2] [Vol. iii. p. 132 (3rd ed.).]
[3] [*A Familiar History of Birds*, 4th ed., pp. 327–328.]

water-hen, with her husband, lived at Cheadle, in Staffordshire, in the rectory moat, for several seasons, "always however leaving it in the spring" (for Scotland, supposably?): being constantly fed, the pair became quite tame, built their nest in a thorn-bush covered with ivy which had fallen into the water; and "when the young are a few days old, the old ones bring them up close to the drawing-room window, where they are regularly fed with wheat; and, as the lady of the house pays them the greatest attention, they have learned to look up to her as their natural protectress and friend; so much so, that one bird in particular, which was much persecuted by the rest, would, when attacked, fly to her for refuge; and whenever she calls, the whole flock, as tame as barn-door fowls, quit the water, and assemble round her, to the number of seventeen. (November, 1833.)

120. "They have also made other friends in the dogs belonging to the family, approaching them without fear, though hurrying off with great alarm on the appearance of a strange dog.

"The position of the water, together with the familiarity of these birds, has afforded many interesting particulars respecting their habits.

"They have three broods in a season—the first early in April; and they begin to lay again when the first hatch is about a fortnight old. They lay eight or nine eggs, and sit about three weeks,—the cock alternately with the hen. The nest in the thorn-bush is placed usually so high above the surface of the water, they cannot climb into it again; but, as a substitute, within an hour after they leave the nest, the cock bird builds a larger and more roomy nest for them, with sedges, at the water's edge, which they can enter or retire from at pleasure. For about a month they are fed by the old birds, but soon become very active in taking flies and water-insects. Immediately on the second hatch coming out, the young ones of the first hatch assist the old ones in feeding and hovering over them, leading

them out in detached parties, and making additional nests for them, similar to their own, on the brink of the moat.

"But it is not only in their instinctive attachments and habits that they merit notice; the following anecdote proves that they are gifted with a sense of observation approaching to something very like reasoning faculties.

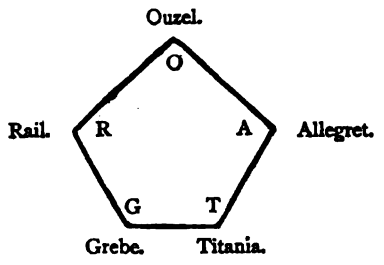
"At a gentleman's house in Staffordshire, the pheasants are fed out of one of those boxes described in page 287, the lid of which rises with the pressure of the pheasant standing on the rail in front of the box. A water-hen observing this, went and stood upon the rail as soon as the pheasant had quitted it; but the weight of the bird being insufficient to raise the lid of the box, so as to enable it to get at the corn, the water-hen kept jumping on the rail to give additional impetus to its weight: this partially succeeded, but not to the satisfaction of the sagacious bird. Accordingly it went off, and soon returning with a bird of its own species, the united weight of the two had the desired effect, and the successful pair enjoyed the benefit of their ingenuity.

"We can vouch for the truth of this singular instance of penetration, on the authority of the owner of the place where it occurred, and who witnessed the fact."

121. But although in these sagacities, and teachablenesses, the bird has much in common with land poultry, it seems not a link between these and water-fowl; but to be properly placed by the ornithologists between the rail and the coot: this latter being the largest of the fringe-foots, singularly dark in colour, and called "fulica" (sooty), or, with. insistence, "fulica atra" (black sooty), or even "fulica aterrima" (blackest sooty). "Coot" is said by Johnson to be Dutch; and that it became "cotée" in French; but I cannot find cotée in my French dictionary.[1] In the meantime, putting the coot and water-hen aside for future

[1] [Nor is it in Littré, and in the later editions of Johnson's Dictionary, the reference to the word is not given. The *Coot* (Dutch, *Koet*) is, according to Skeat, of Teutonic origin.]

better knowledge, we may be content with the pentagonal group of our dabchicks—passing at each angle into another tribe, thus,—(if people must classify, they at least should also *map*). Take the Ouzel, Allegret, Grebe, Fairy, and Rail, and, only giving the Fairy her Latin name, write their fourpenny-worth of initial letters (groat) round a pentagon set on its base, putting the Ouzel at the top angle,[1]—so.




Then, the Ouzels pass up into Blackbirds, the Rails to the left into Woodcocks, the Allegrets to the right into Plovers, the Grebes, down left, into Ducks, and the Titanias, down right, into Gulls. And *there's* a bit of pentagonal Darwinism for you, if you like it, and learn it, which will be really good for something in the end, or the five ends.

122. And for the bliss of classification pure, with no ends of any sort or any number, referring my reader to the works of ornithologists in general, and for what small portion of them he may afterwards care to consult, to my Appendix, I will end this lecture, and this volume, with the refreshment for us of a piece of perfect English and exquisite wit, falling into verse,—the Chorus of the Birds, in Mr. Courthope's *Paradise* of them,[2]—a book lovely, and often faultless, in most of its execution, but little skilled or attractive in plan, and too thoughtful to be understood without such notes as a good author will not write on his own work; partly because he has not time, and partly because he always feels that if people won't look for his meaning, they should not be told it. My own special function, on the contrary, is, and always has been, that of the Interpreter only,[3] in the *Pilgrim's Progress;* and I

[1] [See Note iv. in the matter now added, p. 182.]

[2] [For another reference to the book, see above, § 83, p. 76.]

[3] [Compare what Ruskin says of his function in the epilogue to *Modern Painters*, vol. ii. (Vol. IV. pp. 354–355); in *St. Mark's Rest*, § 209 (Vol. XXIV. p. 371); and in *Deucalion*, ii. ch. ii. § 1, where he speaks of himself as "a village showman."]

trust that Mr. Courthope will therefore forgive my arranging his long cadence of continuous line so as to come symmetrically into my own page (thus also enforcing, for the inattentive, the rhymes which he is too easily proud to insist on), and my division of the whole chorus into equal strophe and antistrophe of six lines each, in which, counting from the last line of the stanza, the reader can easily catch the word to which my note refers.[1]

123. WE wish to declare,
How the birds of the air
All high institutions designed,
And, holding in awe
Art, Science, and Law,
6 Delivered the same to mankind.

To begin with; of old
Man went naked, and cold,
Whenever it pelted or froze,
Till *we* showed him how feathers
Were proof against weathers,
12 With that, *he* bethought him of hose.

And next, it was plain,
That he, in the rain,
Was forced to sit dripping and blind,
While the Reed-warbler swung
In a nest, with her young
18 Deep sheltered, and warm, from the wind.

Line 9. PELTED, said of *hail*, not rain. Felt by nakedness, in a more severe manner than mere rain.

11. "WEATHERS," *i.e.*, *both* weathers—hail and cold: the *armour* of the feathers against hail; the down of them against cold. See account of Feather-mail in *Laws of Fésole*, chap. vi., p. 77, with the first and fifth plates, and Figure 15. [Now Vol. XV. pp. 397–413.]

15. BLIND. By the beating of the rain in his face. In *hail*, there is real danger and bruising, if the hail be worth calling so, for the whole body; while in rain, if *it* be rain also worth calling rain, the great plague is the beating and drenching in the face.

16. SWUNG. Opposed to "sit" in previous line. The human creature, though it sate steady on this unshakeable earth, had no house over its head. The bird, that lived on the tremblingest and weakest of bending

[1] [The following passage is at pp. 106–110 of the *Paradise of Birds*, thus set:—
"We wish to declare how the Birds of the air all high Institutions designed."]

So our homes in the boughs
Made *him* think of the House;
And the Swallow, to help him invent,
Revealed the best way
To economize clay,
And bricks to combine with cement.

The knowledge withal
Of the Carpenter's awl,
Is drawn from the Nuthatch's bill;
And the Sand-Martin's pains
In the hazel-clad lanes
Instructed the Mason to drill.

Is there *one* of the Arts,
More dear to men's hearts?
To the bird's inspiration they owe it;
For the Nightingale first
Sweet music rehearsed,
Prima-Donna, Composer, and Poet.

The Owl's dark retreats
Showed sages the sweets
Of brooding, to spin, or unravel
Fine webs in one's brain,
Philosophical—vain;
The Swallows,—the pleasures of travel.

things, had her *nest* on it, in which even her infinitely tender brood were *deep* sheltered and warm, from the *wind*. It is impossible to find a lovelier instance of pure poetical antithesis.

20. HOUSE. Again antithetic to the perfect word "Home" in the line before. A house is exactly, and only, half-way to a "home." Man had not yet got so far as even that! and had lost, the chorus satirically imply, even the power of getting the other half, ever, since his "*She* gave me of the tree."

24. BRICKS. The first bad inversion permitted, for "to combine bricks with cement." In my Swallow lecture I had no time to go into the question of her building materials;[1] the point is, however, touched upon in the Appendix (pp. 136, 138, and note).

30. "DRILL," for "quarry out," "tunnel," etc., the best general term available.

36. COMPOSER of the music; POET of the meaning.

Compare, and think over, the Bullfinch's nest, etc., §§ 48 to 61 of *Eagle's Nest*. [Vol. XXII. pp. 157–164.]

In modern music the *meaning* is, I believe, by the reputed masters omitted.

39. To SPIN, or unravel. Synthesis and analysis, in the vulgar Greek slang.

[1] [Yet see §§ 52, 53 (above, p. 51).]

Who chirped in such strain
Of Greece, Italy, Spain,
And Egypt, that men, when they heard,
Were mad to fly forth,
From their nests in the North,
And follow—the tail of the Bird.

Besides, it is true,
To *our* wisdom is due
The knowledge of Sciences all;
And chiefly, those rare
Metaphysics of Air
Men "Meteorology" call,

And men, in their words,
Acknowledge the Birds'
Erudition in weather and star;
For they say, "'Twill be dry,—
The Swallow is high,"
Or, "Rain, for the Chough is afar."

46. MAD. Compare Byron of the English in *his* day. "A parcel of staring boobies who go about gaping and wishing to be at once cheap and magnificent. A man is a fool now, who travels in France or Italy, till that tribe of wretches be swept home again. In two or three years, the first rush will be over, and the Continent will be roomy and agreeable." (Life, vol. ii., p. 319.)[1] For sketches of the English of seventeen years later, at the same *spots* (Wengern Alp and Interlachen), see, if you *can* see, in any library, public or private, at Geneva, Topffer's *Excursions dans les Alpes*, 1832. Douzième, Treizième, and Quatorzième Journée.[2]

48. THE TAIL. Mr. Courthope does not condescend to italicize his pun; but a swallow-tailed and adder-tongued pun like this must be paused upon. Compare Mr. Murray's Tale of the Town of Lucca, to be seen between the arrival of one train and the departure of the next,[3]—nothing there but twelve churches and a cathedral,—mostly of the tenth to thirteenth century.

60. AFAR. I did not know of this weather sign; nor, I suppose, did the Duke of Hamilton's keeper, who shot the last pair of Choughs on Arran in 1863. (*Birds of the West of Scotland*, p. 165.[4]) I trust the climate has wept for them; certainly our Coniston clouds grow heavier, in these last years.[5]

[1] [This appears to be a wrong reference. The passage occurs in a letter to Moore, dated "Venice, March 25, 1817." See vol. iii. p. 361 of the old 17-vol. ed., or vol. iv. p. 79 of R. E. Prothero's edition (1900) of the *Letters and Journals*.]

[2] [For other references to this book, see *Art of England*, § 145, and *Præterita*, ii. §§ 14, 210 *n*.]

[3] ["*Plan for visiting Lucca*.—Almost everything deserving of notice at Lucca may be visited in a day, indeed by many in the interval between the arrival and departure of successive railway trains" (*Handbook for Travellers in Central Italy*, 1864, p. 45). Later editions omit this "plan."]

[4] [For another reference to this book, see § 155, p. 150. It is also cited in the lecture of 1884 on "Birds" (see a later volume).]

[5] [See, in a later volume, *The Storm-Cloud of the Nineteenth Century*.]

'Twas the Rooks who taught men
Vast pamphlets to pen
Upon social compact and law,
And Parliaments hold,
As themselves did of old,
Exclaiming "Hear, Hear," for "Caw, Caw."

And whence arose Love?
Go, ask of the Dove,
Or behold how the Titmouse, unresting,
Still early and late
Ever sings by his mate,
To lighten her labours of nesting.

*Their* bonds never gall,
Though the leaves shoot, and fall,
And the seasons roll round in their course,
For their marriage, each year,
Grows more lovely and dear;
And they know not decrees of Divorce.

That these things are truth
We have learned from our youth,
For our hearts to our customs incline,
As the rivers that roll
From the fount of our soul,
Immortal, unchanging, divine.

63. Social. Rightly sung by the Birds in three syllables; but the lagging of the previous line (probably intentional, but not pleasant) makes the lightness of this one a little dangerous for a clumsy reader. The "i-al" of "social" does not fill the line as two full short syllables, else the preceding word should have been written "*on*," not "upon." The five syllables, rightly given, just take the time of two iambs; but there *are* readers rude enough to accent the "on" of upon, and take "social" for two short syllables.

64. Hold. Short for "to hold"—but it is a licentious construction, so also, in next line, "themselves" for "they themselves." The stanza is on the whole the worst in the poem, its irony and essential force being much dimmed by obscure expression, and even slightly staggering continuity of thought. The Rooks may be properly supposed to have taught men to dispute, but not to write. The Swallow teaches building, literally, and the Owl moping, literally; but the Rook does not teach pamphleteering literally. And the "of old" is redundant, for rhyme's sake, since Rooks hold parliaments now as much as ever they did.

76. Each Year. I doubt the fact; and too sadly suspect that birds take different mates. What a question to have to ask at this time of day and year!

82. Rivers. Read slowly. The "customs" are rivers that "go on for

Man, simple and old,
In his ages of gold,
Derived from our teaching true light,
And deemed it his praise
In his ancestors' ways
To govern his footsteps aright.

But the fountain of woes,
Philosophy, rose;
And, what between reason and whim,
He has splintered our rules
Into sections and schools,
So the world is made bitter, for *him*.

But the birds, since on earth
They discovered the worth
Of their souls, and resolved with a vow
No custom to change,
For a new, or a strange,
Have attained unto Paradise, *now*.

124. I could willingly enlarge on these last two stanzas, but think my duty will be better done to the poet if I quote, for conclusion, two lighter pieces of his verse, which will require no comment, and are closer to our present purpose. The first,—the lament of the French Cook in purgatory,—has, for once, a note by the author, giving

ever" flowing from the fount of the soul. The Heart drinks of them, as of waterbrooks.[1]

92. PHILOSOPHY. The author should at least have given a note or two to explain the sense in which he uses words so wide as this. The philosophy which begins in pride, and concludes in malice, is indeed *a* fountain—though not *the* fountain—of woes, to mankind. But true philosophy, such as Fénelon's or Sir Thomas More's, is a well of peace.[2]

98. WORTH. Again, it is not clearly told us what the author means by the worth of a bird's soul, nor how the birds learned it. The reader is left to discern, and collect for himself—with patience such as not one in a thousand nowadays possesses, the opposition between the "fount of our soul" (line 83) and fountain of philosophy.

---

[1] [Psalms xlii. 1 ("As the hart panteth after the water brooks, so panteth my soul after thee, O God"). For other references to Tennyson's *Brook*, see Vol. XX. p. 110.]

[2] [For Fénelon, see Vol. XVII. p. 276 *n.*; for More, *Fors Clavigera*, Letters 6, 7, 13, etc.]

M. Soyer's[1] authority for the items of the great dish,—"symbol of philanthropy, served at York during the great commemorative banquet after the first exhibition." The commemorative soul of the tormented Chef—always making a dish like it, of which nobody ever eats—sings thus:—

"Do you veesh
To hear before you taste, of de hundred-guinea deesh?
Has it not been sung by every knife and fork,
'L'extravagance culinaire à l'Alderman,' at York?
Vy, ven I came here, eighteen Octobers seence,
I dis deesh was making for your Royal Preence,
Ven half de leeving world, cooking all de others,
Swore an oath hereafter, to be men and brothers.
All de leetle Songsters in de voods dat build,
Hopped into the kitchen asking to be kill'd;
All who in de open furrows find de seeds,
Or de mountain berries, all de farmyard breeds,—
Ha—I see do knife, vile de deesh it shapens,
Vith les petits noix, of four-and-twenty capons,
Dere vere dindons, fatted poulets, fowls in plenty,
Five times nine of partridges, and of pheasants twenty;
Ten grouse, that should have had as many covers,
All in dis one deesh, with six preety plovers,
Forty woodcocks, plump, and heavy in the scales,
Pigeons dree good dozens, six-and-dirty quails,
Ortulans, ma foi, and a century of snipes,
But de preetiest of dem all was twice tree dozen pipes
Of de melodious larks, vich each did clap the ving,
And veeshed de pie vas open, dat dey all might sing!"

125. There are stiff bits of prosody in these verses,—one or two, indeed, quite unmanageable,—but we must remember that French metre will not read into ours. The last piece I will give flows very differently. It is in express imitation of Scott—but no nobler model could be chosen;[2] and how much better for minor poets sometimes to write in another's manner, than always to imitate their own.

This chant is sung by the soul of the Francesca of the Bird-ordained purgatory; whose torment is to be dressed

[1] [Alexis Benoît Soyer (1809–1858), the Mirobolant of Thackeray's *Pendennis*; chef at the Reform Club; author of *History of Food of all Ages*. "The history of the dish," adds Mr. Courthope (*Paradise of Birds*, p. 36 *n.*), "is written in a very delicate and appreciative style by the late M. Soyer in his 'Pantropheon,' a chronicle of the gluttonies of various civilizations."]

[2] [On Scott's verse compare Vol. V. pp. 330, 338, 342; *The Elements of English Prosody*; and *Præterita*, iii. § 71.]

only in falling snow, each flake striking cold to her heart as it falls,—but such lace investiture costing, not a cruel price per yard in souls of women, nor a mortal price in souls of birds.

Her "snow-mantled shadow" sings:—

"Alas, my heart! No grief so great
As thinking on a happy state
In misery. Ah, dear is power
To female hearts! Oh, blissful hour
When Blanche and Flavia, joined with me,
Tri-feminine Directory,
Dispensed in latitudes below
The laws of flounce and furbelow;
And held on bird and beast debate,
What lives should die to serve our state!
We changed our statutes with the moon,
And oft in January or June,
At deep midnight, we would prescribe
Some furry kind, or feathered tribe.
At morn, we sent the mandate forth;
Then rose the hunters of the North:
And all the trappers of the West
Bowed at our feminine behest.
Died every seal that dared to rise
To his round air-hole in the ice;
Died each Siberian fox and hare
And ermine trapt in snow-built snare.
For us the English fowler set
The ambush of his whirling net;
And by green Rother's reedy side
The blue kingfisher flashed and died.
His life for us the seamew gave
High upon Orkney's lonely wave;
Nor was our queenly power unknown
In Iceland or by Amazon;
For where the brown duck stripped her breast
For her dear eggs and windy nest,
Three times her bitter spoil was won
For woman; and when all was done,
She called her snow-white piteous drake,
Who plucked his bosom for our sake."

126. "See Hartwig's *Polar World* for the manner of taking Eider-down."—Once more, we have thus much of author's note,[1] but edition and page not specified, which,

[1] [*Paradise of Birds*, p. 43 *n*. The reference is to *The Polar World; a Popular Description of Man and Nature in the Arctic and Antarctic Regions of the Globe*, by Dr. G. Hartwig, 1869.]

however, I am fortunately able to supply. Mr. Hartwig's miscellany being a favourite—what can I call it, sand-hill?—of my own, out of which every now and then, in a rasorial manner, I can scratch some savoury or useful contents;—one or two, it may be remembered, I collected for the behoof of the Bishop of Manchester, on this very subject (*Contemporary Review*, Feb. 1880[1]); and some of Mr. Hartwig's half-sandy, half-soppy, political opinions, are offered to the consideration of the British workman in the last extant number of *Fors*.[2] Touching eider-ducks, I find in his fifth chapter—on Iceland—he quotes the following account, by Mr. Shepherd, of the shore of the island of "Isafjardarjup"—a word which seems to contain in itself an introduction to Icelandic literature:—

127. "The ducks and their nests were everywhere, in a manner that was quite alarming. Great brown ducks sat upon their nests in masses, and at every step started up from under our feet. It was with difficulty that we avoided treading on some of the nests. The island being but three-quarters of a mile in width, the opposite shore was soon reached. On the coast was a wall built of large stones just above the high-water level, about three feet in height, and of considerable thickness. At the bottom, on both sides of it, alternate stones had been left out, so as to form a series of square compartments for the ducks to make their nests in. Almost every compartment was occupied; and, as we walked along the shore, a long line of ducks flew out one after another. The surface of the water also was perfectly white with drakes, who welcomed their brown wives with loud and clamorous cooing. When we arrived at the farmhouse, we were cordially welcomed by its mistress. The house itself was a great marvel. The earthen wall that surrounded it and the window embrasures were occupied by ducks. On the ground, the house was fringed with ducks. On the turf-slopes of the roof we could see ducks; and a duck sat in the scraper.

"A grassy bank close by had been cut into square patches like a chessboard (a square of turf of about eighteen inches being removed, and a hollow made), and all were filled with ducks. A windmill was infested, and so were all the outhouses, mounds, rocks, and crevices. The ducks were everywhere. Many of them were so tame that we could stroke them on their nests; and the good lady told us that there was scarcely a duck on the island which would not allow her to take its eggs without flight or fear."

128. But upon the back of the canvas, as it were,

[1] ["Usury. A Reply and a Rejoinder," reprinted in a later volume of this edition. The number of *Fors* referred to is Letter 89 (September 1880). Hartwig's book is quoted also in the *Art of England*, § 22.]

[2] [That is, the last number extant at the time when Ruskin wrote this chapter; Letter 85 (issued September 1880).]

of this pleasant picture—on the back of the leaf, in his book, p. 65,—this description being given in p. 66,—Doctor Hartwig tells us, in his own peculiar soppy and sandy way—half tearful, half Dryasdusty (or may not we say—it sounds more Icelandic—"Dry-as-sawdusty"), these less cheerful facts:—

"The eider-down is easily collected, as the birds are quite tame. The female having laid five or six pale greenish-olive eggs, in a nest thickly lined with her beautiful down, the collectors, after carefully removing the bird, rob the nest of its contents; after which they replace her. She then begins to lay afresh—though this time only three or four eggs,—and again has recourse to the down on her body. But her greedy persecutors once more rifle her nest, and oblige her to line it for the third time. Now, however, her own stock of down is exhausted, and with a plaintive voice she calls her mate to her assistance, who willingly plucks the soft feathers from his breast to supply the deficiency. If the cruel robbery be again repeated, which in former times was frequently the case, the poor eider-duck abandons the spot, never to return, and seeks for a new home where she may indulge her maternal instinct undisturbed by the avarice of man."

129. Now, as I have above told you, these two statements are given on the two sides of the same leaf; and the reader must make what he may of them. Setting the best of my own poor wits at them, it seems to me that the merciless abstraction of down is indeed the usual custom of the inhabitants and visitors; but that the "good lady," referred to by Mr. Shepherd, manages things differently; and in consequence we are presently farther told of her (bottom of p. 65), that "when she first became possessor of the island, the produce of down from the ducks was not more than fifteen pounds weight in the year; but under her careful nurture of twenty years it had risen to nearly one hundred pounds annually. It requires about one pound and a half to make a coverlet for a single bed, and the down is worth from twelve to fifteen shillings per pound. Most of the eggs are taken and pickled for winter consumption, one or two only being left to hatch."

But here, again, pulverulent Dr. Hartwig leaves us untold who "consumes" all these pickled eggs of the cooing and downy-breasted creatures (you observe, in passing, that

whereas Plato's Theoria does, so far as is necessary; and mine, somewhat more than Plato's. "The first perfection" (then I say, in this so long in coming paragraph) of the theoretic faculty,

" is the kindness and unselfish fulness of heart, which receives the utmost amount of pleasure from the happiness of all things. Of which in high degree the heart of man is incapable; neither what intense enjoyment the angels may have in all that they see of things that move and live, and in the part they take in the shedding of God's kindness upon them, can we know or conceive: only in proportion as we draw near to God, and are made in measure like unto Him, can we increase this our possession of charity, of which the entire essence is in God only. But even the ordinary exercise of this faculty implies a condition of the whole moral being in some measure right and healthy, and to the entire exercise of it there is necessary the entire perfection of the Christian character; for he who loves not God, nor his brother, cannot love the grass beneath his feet, and the creatures which live not for his uses, filling those spaces in the universe which he needs not; while, on the other hand, none can love God, nor his human brother, without loving all things which his Father loves; nor without looking upon them, every one, as in that respect his brethren also, and perhaps worthier than he, if, in the under concords they have to fill, their part be touched more truly. It is good to read of that kindness and humbleness of S. Francis of Assisi, who never spoke to bird or cicala, nor even to wolf and beast of prey, but as his brother; and so we find are moved the minds of all good and mighty men, as in the lesson that we have from the mariner of Coleridge, and yet more truly and rightly taught in the Hartleap Well:—

> 'Never to blend our pleasure, or our pride,
> With sorrow of the meanest thing that feels.'

And again in the *White Doe of Rylstone*, with the added teaching, that anguish of our own

> 'Is tempered and allayed by sympathies,
> Aloft ascending, and descending deep,
> Even to the inferior kinds;'

so that I know not of anything more destructive of the whole theoretic faculty, not to say of the Christian character and human intellect, than those accursed sports, in which man makes of himself, cat, tiger, serpent, chætodon, and alligator in one; and gathers into one continuance of cruelty, for his amusement, all the devices that brutes sparingly, and at intervals use against each other for their necessities."[1]

182. So much I had perceived, and said, you observe, good reader, concerning S. Francis of Assisi, and his sermons,

[1] [In this edition Vol. IV. pp. 148, 149.]

when I was only five-and-twenty,—little thinking at that day how, Evangelical-bred as I was, I should ever come to write a lecture for the first School of Art in Oxford in the Sacristan's cell at Assisi,* or ever—among such poor treasures as I have of friends' reliquaries—I should fondly keep a little "pinch" of his cloak.[1]

Rough cloak of hair, it is, still at Assisi; concerning which, and the general use of camels' hair, or sackcloth, or briars and thorns, in the Middle Ages, together with seal-skins (not badgers'[2]), and rams' skins dyed gules, by the Jews, and the Crusaders, as compared with the use of the two furs, Ermine and Vair, and their final result in the operations of the Hudson's Bay Company, much casual notice will be found in my former work.[3] And now, this is the sum of it all, so far as I can shortly write it.

There is no possibility of explaining the system of life in this world, on any principle of *conqueringly* Divine benevolence. That piece of bold impiety, if it be so, I have always asserted in my well-considered books,[4]—I considering it, on the contrary, the only really pious thing to say, namely, that the world is under a curse, which we may, if we will, gradually remove, by doing as we are bid, and believing what we are told; and when we are told, for instance, in the best book we have about our own old history, that "unto Adam also, and to his wife, did the Lord God make coats of skins, and clothed them,"[5] we are to accept it as the best thing to be done under the

* See *Ariadne Florentina*, chap. v., § 164 (Vol. XXII. p. 409); compare *Fors*, Letter 5.

---

[1] [See Vol. XXIII. p. xlvii. *n.*]

[2] [Exodus xxv. 5.]

[3] [For the coarse clothing worn at Florence, and more especially "camelot," made of "silk and camel's hair," see *Val d'Arno*, §§ 66, 67 (Vol. XXIII. pp. 43–44); for the other points, *Eagle's Nest*, §§ 225, 226 (Vol. XXII. pp. 275–276), and *Deucalion*, i. ch. vii. §§ 36, 37; and for the operations of the Hudson's Bay Company, the paper on "Usury" in the *Contemporary Review* for February 1880 (reprinted in a later volume of this edition).]

[4] [See, for instance, *Modern Painters*, vol. iv. (Vol. VI. pp. 414–416; and "The Mystery of Life and its Arts," in *Sesame and Lilies* (Vol. XVIII.).]

[5] [Genesis iii. 21.]

circumstances, and to wear, if we can get them, wolf skin, or cow skin, or beaver's, or ermine's; but not therefore to confuse God with the Hudson's Bay Company, nor to hunt foxes for their brushes instead of their skins, or think the poor little black tails of a Siberian weasel on a judge's shoulders may constitute him therefore a Minos in matters of retributive justice, or an Æacus in distributive,[1] who can at once determine how many millions a Railroad Company are to make the public pay for not granting them their exclusive business by telegraph.[2]

188. And every hour of my life, since that paragraph of *Modern Painters* was written, has increased, I disdain to say my *feeling*, but say, with fearless decision, my *knowledge*, of the bitterness of the curse, which the habits of hunting and "la chasse" have brought upon the so-called upper classes of England and France;[3] until, from knights and gentlemen, they have sunk into jockeys, speculators, usurers, butchers by battue; and, the English especially, now, as a political body, into what I have called them in the opening chapter of *The Bible of Amiens*,[4]—"the scurviest louts that ever fouled God's earth with their carcases."

The language appears to be violent. It is simply brief, and accurate. But I never meant it to remain without justification, and I will give the justification here at once.

Take your Johnson, and look out the adjective Scurvy, in its higher or figurative sense.

You find the first quotation he gives is from *Measure for Measure*, spoken of the Duke, in monk's disguise:—

> "I know him for a man divine and holy;
> Not scurvy, nor a temporary meddler."[5]

---

[1] [For Minos and Æacus in these functions, see "The Tortoise of Ægina" (Vol. XX. pp. 384, 385).]

[2] [The reference is to the compensation paid to the railway companies, for their interest in telegraph business, at the time of the establishment of a Post Office monopoly under the Act of 1869. Ruskin mentions the matter again in *Fors Clavigera*, Letter 75, § 8.

[3] [On this subject compare Vol. VII. p. 340, and Vol. XIV. p. 282.]

[4] [In the "Notes to Chapter I.," § 34.]

[5] [Act v. sc. 1, line 145.]

In which passage, Shakespeare, who never uses words in vain, nor with a grain less than their full weight, opposes the divineness of men, or their walking with God,[1] to the scurviness of men, or their wallowing with swine; and again, he opposes the holiness of men,—in the sense of "Holy—harmless, undefiled,"[2] and more than that, helpful or healthful in action—to the harmful and filthy action of temporary meddlers, such as the hanging of seventeen priests before breakfast,[3] and our profitable military successes, in such a prolonged piece of "temporary meddling" as the Crimean war.[4]

184. But, secondly, if you look down Johnson's column, you will find his last quotation is not in the higher or figurative, but the lower and literal sense, from Swift, to the effect that "it would be convenient to prevent the excess of drink, with that scurvy custom of taking tobacco." And you will also find, if you ever have the sense or courage to look the facts of modern history in the face, that those two itches, for the pot and the pipe, have been the roots of every other demoralization of the filthiest and literally "scurviest" sort among *all* classes;—the dirty pack of cards; the church pavement *running* with human saliva,—(I have seen the spittings in ponds half an inch deep, in the choir of Rouen cathedral); and the entirely infernal atmosphere of the common cafés and gambling-houses of European festivity, infecting every condition of what they call "æsthesis," left in the bodies of men, until they cannot be happy with the pines and pansies of the Alps, until they have mixed tobacco smoke with the scent of them;[5] and the whole concluding in the endurance—or

[1] [Genesis v. 24, vi. 9.]

[2] [Hebrews vii. 26. Compare Vol. VII. p. 206, and Vol. XVII. pp. 60, 225, 287.]

[3] [A reference to the murder of Archbishop Darboy and other hostages by the Paris Commune on May 24, 1871, and following days.]

[4] [Ruskin, like so many other people, would seem from this passage to have changed his opinion about the policy of that war. At the time he was a supporter of it: see Vol. V. pp. 327, 410.]

[5] [For Ruskin's hatred of tobacco, see Vol. XVII. p. 334 *n.*; and below, pp. 227, 284.]

even enjoyment—of the most squalid conditions of filth in our capital cities, that have ever been yet recorded, among the disgraces of mankind.

135. But, thirdly, Johnson's central quotation is again from *Measure for Measure*:—

"He spoke *scurvy* and *provoking* terms against your honour."[1]

The debates in the English House of Commons, for the last half-century, having consisted virtually of nothing else![2]

I next take the word "lout," of which Johnson gives two derivations for our choice: it is either the past participle of "to lower, or make low"; a lowed person (as our House of Lords under the direction of railway companies and public-house keepers); or else—and more strictly I believe in etymology—a form of the German "leute," "common people." In either case, its proper classical English sense is given by Johnson as "a mean, awkward fellow; a bumpkin, a clown."

Now I surely cannot refer to any general representation of British society more acceptable to, and acknowledged by, that society, than the finished and admirably composed drawings of Du Maurier[3] in *Punch*, which have become every week more and more consistent, keen, and comprehensive, during the issues of the last two years.

I take three of them, as quite trustworthy pictures, and the best our present arts of delineation could produce, of the three Etats, or representative orders, of the British nation of our day.

Of the Working class, take the type given in Lady Clara Robinson's garden tea-party, p. 174, vol. 79.

Of the Mercantile class, Mr. Smith, in his drawing-room after dinner, p. 222, vol. 80.

[1] [This is a slip. The quotation is from *Othello*, Act i. sc. 2, line 7.]

[2] [For other passages in which Ruskin expresses contempt of the "House of Talk," see Vol. VII. p. 450, and Vol. XVIII. p. 424.]

[3] [Compare *Art of England*, § 136.]

And of the Noblesse, the first five gentlemen on the right (spectator's right) of the line, in the ball at Stilton House (July 3rd, 1880).

186. Of the manner or state of lout, to which our manufacturing prosperity has reduced its artisan, as represented in the first of these frescoes, I do not think it needful to speak here; neither of the level of sublime temperament and unselfish heroism to which the dangers of commercial enterprise have exalted Mr. Smith. But the five consecutive heads in the third fresco are a very notable piece of English history, representing the polished and more or less lustrous type of lout; which is indeed a kind of rolled shingle of former English noblesse capable of nothing now in the way of resistance to Atlantic liberalism, except of getting itself swept up into ugly harbour bars, and troublesome shoals in the tideway.

And observe also, that of the three types of lout, whose combined chorus and tripudiation leads the present British Constitution its devil's dance, this last and smoothest type is also the dullest. Your operative lout cannot indeed hold his cup of coffee with a grace, or possess himself of a biscuit from Lady Clara's salver without embarrassment; but, in his own mill, he can at least make a needle without an eye, or a nail without a head, or a knife that won't cut, or something of that sort, with dexterity. Also, the middle class, or Smithian lout, at least manages his stock-broking or marketing with decision and cunning; knows something by eye or touch of his wares, and something of the characters of the men he has to deal with. But the Ducal or Marquisian lout has no knowledge of anything under the sun, except what sort of horse's quarters will carry his own, farther weighted with that smooth block or pebble of a pow; and no faculty under the sun of doing anything, except cutting down the trees his fathers planted for him, and selling the lands his fathers won.

187. That is indeed the final result of hunting and horse-racing on the British landlord. Of its result on the

British soldier, perhaps the figures of Lord George Sackville at the battle of Minden,[1] and of Lord Raglan at the battle of Alma (who in the first part of the battle did not know where he was, and in the second plumed himself on being where he had no business to be),[2] are as illustrative as any I could name; but the darkest of all, to my own thinking, are the various personages, civil and military, who have conducted the Caffre war to its last successes, of blowing women and children to death with dynamite, and harrying the lands of entirely innocent peasantry, because they would not betray their defeated king.[3]

138. Of the due and noble relations between man and his companion creatures, the horse, dog, and falcon, enough has been said in my former writings[4]—unintelligible enough to a chivalry which passes six months of its annual life in Rotten Row, and spends the rents of its Cumberland Hills in building furnaces round Furness Abbey; but which careful students either of past knighthood, or of future Christianity, will find securely and always true. For the relations between man and his beast of burden, whether the burden be himself or his goods, become beautiful and honourable, just in the degree that both creatures are useful to the rest of mankind, whether in war or peace. The Greeks gave the highest symbol of them in the bridling of Pegasus for Bellerophon by Athena;[5] and from that myth you may go down to modern times—understanding, according to your own sense and dignity, what all prophecy, poetry,

[1] [At which, as commander of British contingent with Prince Ferdinand, he neglected to lead the British cavalry in pursuit of the French, 1759, for which he was dismissed the service.]

[2] [A criticism of Lord Raglan's conduct of the battle, and especially of his stationing himself on the Knoll, where he lost touch with his troops, may be read in Sir Evelyn Wood's *The Crimea in 1854 and 1894*, p. 49; compare Kinglake's second volume, ed. 1, pp. 378–379, 471.]

[3] [Ruskin uses the term "Caffre" generally of wars against the natives in South Africa (compare Vol. XVII. p. 219 *n.*), the operations to which he here refers being those against the Zulus under Cetywayo. Ruskin's view of these affairs reflects that of his friend, Miss Colenso; see the last chapters of *History of the Zulu War*, by Frances E. Colenso, 1880.]

[4] [See, for instance, Vol. VII. p. 263; Vol. XXII. p. 144; and *Fors Clavigera*, Letter 75.]

[5] [For notices of the myth, see *Queen of the Air* (Vol. XIX. pp. 295 *n.*, 325–326).]

history, have told you—of the horse whose neck is clothed with thunder, or the ox who treadeth out the corn[1]—of Joseph's chariot, or of Elijah's—of Achilles and Xanthus—Herminius and Black Auster—down to Scott and Brown Adam—or Dandie Dinmont and Dumple.[2] That pastoral one, is, of all, the most enduring. I hear the proudest tribe of Arabia Felix is now reduced by poverty and civilization to sell its last well-bred horse; and that we send out our cavalry regiments to repetitions of the charge at Balaclava, without horses at all; those that they can pick up wherever they land being good enough for such military operations. But the cart-horse will remain, when the charger and hunter are no more; and with a wiser master.

"I'll buy him, for the dogs shall never
Set tooth upon a friend so true;
He'll not live long; but I for ever
Shall know I gave the beast his due.
. . . . . .
Ready, as birds to meet the morn,
Were all his efforts at the plough;
Then, the mill-brook—with hay or corn,
Good creature! how he'd spatter through!
. . . . . .
I left him in the shafts behind,
His fellows all unhook'd and gone;
He neigh'd, and deemed the thing unkind;
Then, starting, drew the load alone!
. . . . . .
Half choked with joy, with love, and pride,
He now with dainty clover fed him;
Now took a short triumphant ride,
And then again got down, and led him."[3]

[1] [Job xxxix. 19; Deuteronomy xxv. 4.]

[2] [See Genesis l. 9; 2 Kings ii. 12; *Iliad*, xix. 404–417 (referred to also in Vol. VII. p. 338, and *Fors Clavigera*, Letter 9); "The Battle of the Lake Regillus" in Macaulay's *Lays*; (for an account of Scott's charger Brown Adam), Lockhart's *Life*, ch. xiv.; and (for Dumple, Dandie Dinmont's spirited little nag), *Guy Mannering*, ch. xxiii.]

[3] [Robert Bloomfield: "Abner and the Widow Jones" in *Wild Flowers; or, Pastoral and Local Poetry*, 1806, pp. 9, 10. For another reference to these verses, addressed by the shoemaker-poet (1766–1823) to his horse Bayard, see, in a later volume, *Roadside Songs of Tuscany* ("The Story of Lucia"). In his diary for January 13, 1879, Ruskin notes: "Diary begins again ten o'clock, and I but just up, or just down, having discovered, as I finished arranging books upstairs, a new poet, Bloomfield. A day to date the new beginnings from."]

189. Where Paris has had to lead *her* horses, we know;[1] and where London had better lead hers, than let her people die of starvation. But I have not lost my hope that there are yet in England Bewicks and Bloomfields, who may teach their children—and earn for their cattle—better ways of fronting, and of waiting for, Death.

Nor are the uses of the inferior creatures to us less consistent with their happiness. To all that live, Death must come. The manner of it, and the time, are for the human Master of them, and of the earth, to determine—not to his pleasure, but to his duty and his need.

In sacrifice, or for his food, or for his clothing, it is lawful for him to slay animals; but not to delight in slaying any that are helpless. If he choose, for discipline and trial of courage, to leave the boar in Calydon, the wolf in Taurus, the tiger in Bengal, or the wild bull in Aragon, there is forest and mountain wide enough for them: but the inhabited world in sea and land should be one vast unwalled park and treasure lake, in which its flocks of sheep, or deer, or fowl, or fish, should be tended and dealt with, as best may multiply the life of all Love's Meinie,[2] in strength, and use, and peace.

[1] [The reference is to the horse-flesh eaten during the siege of Paris: see, for instance, pp. 89, 201 of the *Diary of the Besieged Resident in Paris*, 1871, written by H. Labouchere.]

[2] [See the Introduction, above, p. xxix.]

# APPENDIX

140. THIS part of the book will, I hope, be continuous with the text of it, containing henceforward, in each number,[1] the nomenclature hitherto used for the birds described in it, and the Author's reason for his choice or change of names. In the present number, it supplies also the nomenclature required for the two preceding ones, and thus finishes the first volume.

The names given first, in capitals, for each bird, are those which the Author will in future give it, and proposes for use in elementary teaching. They will consist only of a plain Latin specific name, with one, or at the most two, Latin epithets; and the simplest popular English name, if there be one; if not, the English name will usually be the direct translation of the Latin one.

Then in order will follow[2]—

I. Linnæus's name, marked L.

II. Buffon's name, marked F, the F standing also for "French" when any popular French name is given with Buffon's.

III. The German popular name, marked T (Teutonic), for I want the G for Mr. Gould; and this T will include authoritative German scientific names also.

[1] [The present instalment of the Appendix was, however, the only one to be issued.]

[2] [The references are to Linnæus's *Systema Naturæ* (see p. 98 *n.*); Buffon's *Natural History of Birds* (p. 81 *n.*); Gould's *Birds of Great Britain* (p. 24 *n.*); Yarrell's *History of British Birds* (p. 49 *n.*); Dressler's plates in Bettoni's *Uccelli che nidificano in Lombardia* (p. 30 *n.*); Gesner's *Vogelbuch* (10 vols., Zurich, 1581); and Bewick's *Birds*. Other books referred to by abbreviations in following pages are: Pennant's *Genera of Birds* (Edinburgh, 1773); Temminck's *Manuel d'Ornithologie* (§ 97); F. Selby's *Catalogue of the Generic and Subgeneric Types of the Class Aves* (Newcastle, 1840); "Mont.," Montagu's *Dictionary of British Birds*; "Briss.," M. J. Brisson's *Ornithologia sive Synopsis methodica sistens Avium divisionem*, etc. (6 vols., Paris, 1760); "Edw.," E. Edwards's *A Natural History of Uncommon Birds* (210 plates, 1743–1751); John Fleming's *Philosophy of Zoology* (Edinburgh, 1822), and *A General History of Birds*, by John Latham, M.D., 10 vols., 1824.]

IV. The Italian popular name, if one exists, to give the connection with old Latin, marked I.

V. Mr. Gould's name, G; Yarrell's, Y; Dressler's, D; and Gesner's, Ges, being added, if different.

VI. Bewick's, B.

VII. Shakespeare's and Chaucer's, if I know them; and general references, such as may be needful.

The Appendix will thus contain the names of all the birds I am able to think or learn anything about, as I can set down what I think or learn; and with no other attempt at order than the slight grouping of convenience: but the numbers of the species examined will be consecutive, so that L. M. 25,—Love's Meinie, Number twenty-five,—or whatever the number may be, will at once identify any bird in the system of the St. George's schools.

I

### 141. RUTILA FAMILIARIS. ROBIN REDBREAST

Motacilla Rubecula. L.

Rouge-Gorge. F.

Roth-breustlein.—Wald-roetele.—Winter-roetele.—Roth-kehlschen. T.

Petti-rosso. I.

Erythacus Rubecula. G. Rubecula Erythacus. Ges.
Erythaca Rubecula. Y.
Rubecula Familiaris. D.

Ruddock. B.

Ruddock, in *Cymbeline; tame* Ruddocke, in *Assembly of Foules;* full robin-redebreast, in the *Court of Love:*[1]

"The second lesson, Robin Redebreast sang."

It is rightly classed by F. and Y. with the Warblers. Gould strangely puts it with his rock-birds, "saxicolinæ,"—in which, however, he also includes the sedge warbler.

[1] ["The ruddock with charitable bill" (*Cymbeline,* Act iv. sc. 2, line 224); "The tame ruddocke and the coward kite" (Chaucer's *Assembly of Foules,* stanza 49).]

The true Robin is properly a wood-bird; the Swedish blue-throated one lives in marshes and arable fields. I have never seen a robin in really wild mountain ground.

There is only one European species of the redbreasted Robin. Gould names two Japanese ones.

II

142. HIRUNDO DOMESTICA. HOUSE SWALLOW.

Hirundo Rustica. L.
Hirondelle Domestique. F.
Schwalbe. T. Swala, Swedish, and Saxon, whence our Swallow: but compare Lecture II., § 44 [p. 47].
Rondine Comune. I. (note Rondine, the Swallow; Rondone, the Swift).
Hirundo Rustica. G. and Y.
Chimney-Swallow. B.

III

148. HIRUNDO MONASTICA. MARTLET.

Hirundo Urbica. L.
Hirondelle de Fenêtre. F.
Kirch-schwalbe. (Church-Swallow.) T.
Balestruccio. I.
Chelidon Urbica. D. and G.
Hirundo Urbica. Martin. Y.
Martlet, Martinet, or Window-Swallow. Y.

I cannot get at the root of this word, "Martlet,"[1] which is the really classical and authoritative English one. I have called it Monastica, in translation of Shakespeare's "temple-haunting."[2] The main idea about this bird, among people

[1] [According to Murray's *New English Dictionary*, "martlet" is only an altered form of "martinet," which in its turn is a diminutive of "martin"; that Christian name is said to have been applied to the swallow because it comes in March and departs about Martinmas.]

[2] [*Macbeth*, Act i. sc. 6, 4:—

"This guest of summer,
The temple-haunting martlet."]

who have any ideas, seems to be that it haunts and builds among grander masses or clefts of wall than the common Swallow. Thus the Germans, besides Church-Swallow, call it wall,—rock,—roof,—or window, swallow, and Mur-Spyren, or Münster Spyren. (Wall-walker? Minster-walker?) But by the people who have no ideas, the names "town" and "country," "urbica" and "rustica," have been accepted as indicating the practical result, that a bird which likes walls will live in towns, and one which is content with eaves may remain in farms and villages, and under their straw-built sheds.[1]

My name, Monastica, is farther justified by the Dominican severity of the bird's dress, dark grey-blue and white only; while the Domestica has a red cap and light brown bodice, and much longer tail. As far as I remember, the bird I know best is the Monastica. I have seen it in happiest flocks in all-monastic Abbeville, playing over the Somme in morning sunlight, dashing deep through the water at every stoop, like a hard-cast stone.[2]

IV

144. HIRUNDO RIPARIA. BANK-MARTLET

Hirundo Riparia. L.
Hirondelle de Rivage. F.
Rhein-schwalbe (Rhine-Swallow),—ufer-schwalbe (Shore-Swallow),—erd-schwalbe (Earth-Swallow). T.
Topino. (The mouse-colour.)—Rondine de Riva. I.
Cotyle Riparia. G. Hirundo Riparia. Y.
Bank-Martin. B.

The Italian name, "Topino," is a good familiar one, the bird being scarcely larger than a mouse, and "the head, neck, breast, and back of a mouse-colour." (B.) It is the smallest of the Swallow tribe, and shortest of wing;

[1] [Gray's *Elegy:* see above, p. 73.]
[2] [See the note on this in Ruskin's diary of 1868, quoted in Vol. XIX. p. xl.]

accordingly, I find Spallanzani's experiment on the rate of swallow-flight[1] was, for greater certainty and severity, made with this apparently feeblest of its kind:—a marked Topino, brought from its nest at Pavia to Milan (fifteen miles), flew back to Pavia in thirteen minutes. I imagine a Swift would at least have doubled this rate of flight, and that we may safely take a hundred miles an hour as an average of swallow-speed. This, however, is less by three-fifths than Michelet's estimate. See above, Lecture II., § 48 [p. 49].

I have substituted "bank" for "sand" in the English name, since all the six quoted authorities give it this epithet in Latin or French, and Bewick in English. Also, it may be well thus to distinguish it from birds of the sea-shore.

V

145. HIRUNDO SAGITTA. SWIFT

Hirundo Apus. L.
Martinet Noir. F.
Geyr-schwalbe. (Vulture-Swallow.) T.
Rondone. (Plural, Rondini.) I.
Cypselus Apus. G. and Y.
Swift, Black Martin, or Deviling. B.

I think it will be often well to admit the license of using a substantive for epithet (as one says rock-bird or sea-bird, and not "rocky," or "marine"), in Latin as well as in English. We thus greatly increase our power, and assist the brevity of nomenclature; and we gain the convenience of using the second term by itself, when we wish to do so, more naturally. Thus, one may shortly speak of "The Sagitta" (when one is on a scientific point where "Swift" would be indecorous!) more easily than one could

[1] [Lazzaro Spallanzani, *Opusculi sopra diversi animali, appendice ai Viaggi nelle Due-Sicilie*, Pavia, 1797, vol. vi. p. 110; quoted in Bettoni's *Storia Naturale degli Uccelli che nidificano in Lombardia*, vol. ii., Plate 53.]

migrant, in the Holy Land. I have never seen it, that I know of, nor thought of it in the lecture on the Swallow; but give here the complete series of Hirundines, of which some notice may incidentally afterwards occur in the text.

VII

147. NOCTUA EUROPÆA. NIGHT-JAR OF EUROPE

Caprimulgus Europæus. L.
L'Engoulevent. F. (Crapaud-volant, popular.)
Geissmelcher.—Nacht-schade. T.
Covaterra. I.
Caprimulgus Europæus. G. and Y.
Night-jar. B.

Dorrhawk and Fern-owl, also given by Bewick, are the most beautiful English names for this bird; but as it is really neither a hawk nor an owl, though much mingled in its manners of both, I keep the usual one, Night-jar, euphonious for Night-Churr, from its continuous note like the sound of a spinning-wheel. The idea of its sucking goats, or any other milky creature, has long been set at rest; and science, intolerant of legends in which there is any use or beauty, cannot be allowed to ratify in its dog or pig-Latin those which are eternally vulgar and profitless. I had first thought of calling it Hirundo Nocturna; but this would be too broad massing; for although the creature is more swallow than owl, living wholly on insects, it must be properly held as a distinct species from both. Owls cannot gape like constrictors; nor have swallows whiskers or beards, or combs to keep both in order with, on their middle toes. This bird's cat-like bristles at the base of the beak connect it with the bearded Toucans, and so also the toothed mandibles of the American cave-dwelling variety. I shall not want the word Noctua for the owls themselves, and it is a pretty and simple one for this tribe, enabling the local epithet "European," and other necessary ones, of varieties, to be retained for the second or specific term.

UNIV. OF
CALIFORNIA

Drawn by J. Ruskin

"Development." Crocodile latent in Toucan.

Nacht-schade, Night-*loss*, the popular German name, perhaps really still refers to this supposed nocturnal thieving; or may have fallen euphonious from Nacht-schwalbe, which in some places abides. "Crapaud-volant" is ugly, but descriptive, the brown speckling of the bird being indeed toadlike, though wonderful and beautiful. Bewick has put his utmost skill into it; and the cut, with the Bittern and White Owl, may perhaps stand otherwise unrivalled by any of his hand.

Gould's drawing of the bird on its ground nest, or ground contentedly taken for nest, among heath and scarlet-topped lichen, is among the most beautiful in his book;[1] and there are four quite exquisite drawings by Mr. Ford, of African varieties, in Dr. Smith's zoology of South Africa.[2] The one called by the doctor Europæus seems a greyer and more graceful bird than ours. Natalensis wears a most wonderful dark oak-leaf pattern of cloak. Rufigena, I suppose, blushes herself separate from Ruficollis of Gould? but these foreign varieties seem countless. I shall never have time to examine them, but thought it not well to end the titular list of the swallows without notice of the position of this great tribe.

VIII

148. MERULA FONTIUM. TORRENT-OUZEL[3]

Sturnus Cinclus. L.
Merle d'Eau. F.
Bach-Amsel. T.
Merla Aquaiola. I.
Cinclus Aquaticus. G. and Y.
Water-Ouzel. B.

Turdus Cinclus, Pennant; Common Dipper, Y.; Didapper, Doucker, Water Crow, Water Piot, B.; Cincle Plongeur, Temminck; Wasser Trostel, Swiss.

[1] [Vol. ii., No. 1.]
[2] [*Illustrations of the Zoology of South Africa*, by Andrew Smith, M.D.: Aves. London, 1849. Plates 99–102. The fact that the illustrations are by Mr. Ford is stated in the Preface to the whole work (in the volume containing "Mammalia").]
[3] [See above, §§ 89 *seq.*]

The scientific full arrangement, according to Yarrell,[1] is thus :—

1. Order—Insessores.
2. Tribe—Dentirostres.
3. Genus—Merulidæ.
4. Species—Cinclus.
5. Individual—Aquaticus.

You will please observe that some of the scientific people call it a blackbird—some a thrush—some a starling—and the rest a Cincle, whatever that may be. It remains for them now only to show how the Cincle has been developed out of the Winkle, and the Winkle out of the Quangle-Wangle.[2] You will note also that the Yorkshire and Durham mind is balanced between the two views of its being a crow or a magpie.[3] I am content myself to be in harmony with France and Italy, in my "Merula," and with Germany in my *Torrent*-Ouzel. Their "bach" (as in Staubbach, Giessbach, Reichenbach) being essentially a mountain waterfall; and their "amsel," as our Damsel, merely the Teutonic form of the Demoiselle or Domicilla—"House-Ouzel," as it were (said of a nice girl)—Domicilla again being, I think, merely the transposition of Ancilla Domini,—Behold, the handmaid of the Lord[4] (see frontispiece to fifth volume of *Modern Painters*): which, if young ladies in general were to embroider on their girdles—though their dresses, fitting at present "as close as a glove" (see description of modern American ideal in *A Fair Barbarian*[5]) do not usually require girdles either for their keys or their manners,—it

[1] [See *History of British Birds*, 2nd edition, 1845, vol. i. p. 181.]

[2] [See Edward Lear's *Nonsense Songs and Stories*; and compare Vol. IV. p. 237.]

[3] [The classification of this dipper (or cinclus) has, as Ruskin says, puzzled the ornithologists, owing to its partial resemblance to the thrush or blackbird tribe (turdus), while Linnæus classed it rather with the starling (sturnus). Bewick's actual heading to his chapter on the bird (vol. ii. p. 16) is "Water Ouzel, Water Crow, Dipper or Water Piot"—the last name being a synonym for magpie. It thus appears that Ruskin's reference here is to Bewick's collection of names. He was himself a Northumbrian, so that by "the Yorkshire and Durham mind," Ruskin must mean that Bewick collects various names given to the bird in northern counties whose streams it frequents.]

[4] [Luke i. 38; compare above, p. 43.]

[5] [See ch. ii. of Mrs. Frances Hodgson Burnett's story.]

would probably be thought irreverent by modern clergymen; but if the demoiselle were none the better for it, she *could* certainly be none the worse.

### 149. ALLEGRETTA NYMPHÆA. LILY-OUZEL[1]

#### VAR. 1 (IXA.)

ALLEGRETTA NYMPHÆA, MACULATA. SPOTTED ALLEGRET

Rallus Porzana. L.
Poule d'Eau Marouette. F.
Winkernell. T.
Porzana. I.
Zapornia Porzana. G.
Crex Porzana. Y.
Ortygometra Porzana. Steph.?[2]
Gallinula Maculata et Punctata. Brehmen.?
Spotted Crake. B.

The "Winkernell" is I believe provincial (Alsace); so, Girardina, Milanese, and Girardine, Picard.—I can make nothing whatever of any of these names;—Porzana, Bolognese and Venetian, might perhaps mean Piggy-bird; and Ortygometra Porzana would then mean, in serious English, the "Quail-sized Pig-bird." I am sorry not to be able to do better as Interpreter for my scientific friends.

#### VAR. 2 (IXB.)

ALLEGRETTA NYMPHÆA, STELLARIS. STARRY ALLEGRET[3]

Not separated by Linnæus, or Buffon, or Bewick, nor by popular German or French names, from the Marouette.
Crex Baillonii, Baillon's Crake. Y.
Porzana Pygmæa. G.
Gallinula Stellaris. Temminck.

[1] [See above, §§ 93 *seq.*]
[2] [The queries are Ruskin's. The references, which he must have taken at second hand from some manual, are to George Shaw's *General Zoology*, continued by J. F. Stephens, vol. xii. pt. i. p. 223, and presumably to the German ornithologist, Christian Ludwig Brehm.]
[3] [See above, § 97.]

VAR. 8 (IXc.)

ALLEGRETTA NYMPHÆA, MINUTA. TINY ALLEGRET [1]

Porzana Minuta, Olivaceous Crake. G.
Crex Pusilla, Little Crake. Y.
Poule d'Eau Poussin. Temminck.
Little Gallinule. B.

It never occurred to me, when I was writing of classical landscape, that "Poussin" to a French ear conveyed the idea of "chicken," or of the young of birds in general.[2] (Is it from "pousser" as if they were a kind of budding of bird?) Everybody seems to agree in feeling that this is a kind of wren among the dabchicks. Bewick's name, "Little Gallinule," meaning of course, if he knew it, the twice-over little Gallina;—and here again the question occurs to me about its voice. Is it a twice-over little crow, called a "creak," or anything like the Rail's more provokingly continuous objurgation?—compare notes below on Rallus Aquaticus [p. 147]. I find, with some alarm, in Buffon,[3] that one with a longer tail, the Cau-rale or Tail-rail of Cayenne, is there called "Little Peacock of the Roses"; but its cry is represented by the liquid syllables "Kiolo," while the black-spotted one of the Society Islands—Magellan's "Water-quail"—says "Poo-a-nee," and the Bidi-bidi of Jamaica says "Bidi-bidi."

X

150. TREPIDA STAGNARUM. LITTLE GREBE [4]

Colymbus Minur. L.
Le Castagneux. F.
Deutchel. T.

[1] [See above, §§ 98, 99.]
[2] ["*Poussin*, poulet nouvement éclos" (Littré).]
[3] [*Œuvres Complètes* (Panthéon Littéraire), vol. v. pp. 374, 375; or in the English version, *The Natural History of Birds from the French of Count de Buffon*, vol. viii. pp. 159–161.]
[4] [See above, §§ 100 *seq.*]

Tropazarola? I.
Podiceps Minor. C.
Little Grebe. B.

The Yorkshire accents and changes of its name are given by Bewick: Dobchick—small doucker; Dipper, or Didapper.

In Barbadoes—Two-penny chick.

It seems to me curious that without knowing Buffon's name, which I have only looked up now, "the Chestnutty," given from the brown on its back, I should have, myself, always called its foot "chestnutty" from the shape of its lobes.

My "Trepida" will do well enough, I think, for a Latin rendering of Grebe, and will include the whole group of them,—"stagnarum" remaining for this species only, and the others being called Tippeted Trepids, or Muffed Trepids, Eared Trepids or Majestic Trepids, as I find out what they wear, and how they behave. Grèbe is used by Buffon only for the larger ones, and Castagneux for the smaller, which is absurd enough, unless the smaller are also the browner.

But I find in Buffon[1] some interesting particulars not given in my text—namely, that the whole group differs from common chicks, not only in the lobed feet, but in these being set so far back (becoming almost a fish's tail indeed, rather than a bird's legs) that they are quite useless for walking, and could support the bird only on land if it stood upright: but that it "dashes through the waves" (*i.e.*, the larger varieties through sea waves), and "runs on the surface"? (*i.e.*, the smaller varieties on pools), with surprising rapidity; its motions are said to be never quicker and brisker than when under water. It pursues the fish to a very great depth, and is often caught in fishermen's nets. It dives deeper than the scoter duck, which is taken only on beds of shell-fish left bare by the ebb-tide; while the Grebes are taken in the open sea, often at more than twenty feet depth.

[1] [*The Natural History of Birds, from the French of Count de Buffon*, vol. viii. pp. 214, 215.]

XI

151. TITANIA ARCTICA. ARCTIC FAIRY[1]

Tringa Fulicaria. L.
(No French name given in my edition of Buffon!)
No German, anywhere.
No Italian, anywhere.

But of suggestions by scientific authors, here are enough to choose from:—

Lobipes Hyperboreus, G. Lobipes Hyperborea, Selby. Phalaropus Hyperboreus, Penn. Phalarope Hyperbore, Temm. Phalaropus Fulicaria, Mont. Phalaropus Fuscus, Bewick. Phalaropus Rufescens, Briss. Red Coot-footed Tringa, Edw. Red-necked Phalarope, Gould. Lobe-foot, Selby. Cootfoot, Fleming.

I am a little shocked at my own choice of name in this case, not quite pleasing my imagination with the idea of a Coot-footed Fairy. But since Athena herself thinks it no disgrace to take for disguise the likeness either of a seagull or a swallow,[2] a sea-fairy may certainly be thought of as condescending to appear with a diving bird's foot; and the rather that, if one may judge by painters' efforts to give us sight of Fairyland, the general character of its inhabitants is more that of earthly or marine goblins than aerial ones.

Now this is strange! At the last moment, I find this sentence in Gould's introduction: "The generic terms Phalaropus and Lobipes have been instituted for the *fairy-like* phalaropes."[3]

[1] [See above, §§ 111 *seq.*]

[2] [For Athena as seagull, see *Odyssey*, iii. 372, Ἀθήνη φήνῃ εἰδομένη, identified from Aristotle's *Hist. An.* (8, 5) as the sea-eagle; for Athena as swallow, see above, § 79, p. 71.]

[3] [*Birds of Great Britain*, vol. i. p. cxviii.]

XIA

TITANIA INCONSTANS. CHANGEFUL FAIRY[1]

Tringa Lobata. L.
Phalaropus Fulicarius (Grey Phalarope). G.
Phalaropus Lobatus. Latham.
"Phalarope with indented festoons," English trans. of Buffon.[2]—It is of no use to ring the changes farther.

XII

152. RALLUS AQUATICUS. WATER RAIL[3]

Rallus Aquaticus. L., G., Y.
Râle d'Eau. F.
Samet-Hennle—Velvet (silken?) hen. Ges.
Schwartz-Wasser-Hennle. T.?
Vagtel-Konge. Danish.
Porzana, or Forzana, at Venice.
Brook-Ouzel—Velvet Runner. B.

I take this group of foreign names from Buffon, but question the German one, which must belong to the Water Hen; for the Rail is not black, but prettily grey and spotted, and I think Buffon confuses the two birds, as several popular names do. Thus, the Velvet Hen also, I fancy, is the Water Hen; but Bewick's Velvet-Runner partly confirms it to the Rail. I find nothing about velvet said in describing the plumage.

I leave Linnæus's for our Latin name, under some protest. Rallus is a late Latin adjective, meaning "thin," and

[1] [See above, §§ 114 *seq.*]
[2] [*The Natural History of Birds*, vol. viii. p. 212.]
[3] [See above, §§ 116 *seq.*]

if understood as "Thin-bird," or "Lath-like," bird, would be reasonable; but if it stand, as it does practically, for Railing or Rattling bird, it is both bad Latin, and, as far as I can make out, calumnious of the usually quiet creature.

Note also, for a connected piece of scholarship, that our English verb to "rail" does not properly mean to scold, or to abuse noisily; it is from "railler," and means to "rally," or jest at, which is often a much wickeder thing to do, if the matter be indeed no jest.

Note also of Samet or Samite, its derivation from late Greek ἑξάμιτον, silken stuff woven of six threads, of which I believe two were of gold. The French oriflamme was of crimson samite, and I don't see why the French shouldn't call this bird Poule de Soie, instead of by their present ugly name—more objectionable on all grounds, of sense, scholarship, and feeling, than the English one. But see the next species.

### XIIA

### 158. PULLA AQUATICA. WATER HEN [1]

There seems so much confusion in the minds, or at least the language, of ornithologists, between the Water Rail and Water Hen, that I give this latter bird under the number XIIA. rather than XIII. (which would, besides, be an unlucky number to end my Appendix with); and it would be very nice, if at all possible or proper, to keep these two larger dabchicks connected pleasantly in school-girl minds by their costumes, and call one "Silken Runner," and this,—which, as said above, Gesner seems to mean, Velvet Runner, or Velvet Hen.—Poule de Soie or Poule de Velours? I am getting a little confused myself, however, I find at last, between Poules, Poussins, Pullets,

[1] [See above, §§ 119 *seq.*]

and Pullas; and must for the present leave the matter to the reader's choice and fancy, till I get some more birds looked at, and named:—only, for a pretty end of my Appendix, here are two bits of very precious letters, sent me by friends who know birds better than most scientific people, but have been too busy—one in a "Dorcas Society," and the other in a children's hospital—to write books, and only now write these bits of letters on my special petition. The member of the Dorcas Society sends me this brief but final and satisfactory answer to my above question about birds' ears:[1]—

"We talk and think of birds as essentially musical and mimetic, or at least vocal and noisy creatures; and yet we seem to think that although they have an ear, they have no ears. Little or nothing is told us of the structure of a bird's ear. We are now too enlightened to believe in what we can't see; and ears that are never pricked, or cocked, or laid back,—that merely receive and learn, but don't express,—that are organs, not features, don't interest our philosophers now.

"If you blow gently on the feathers of the side of a bird's head, a little above and behind the corner of the beak, a little below and behind the eye, the parted feathers will show the listening place; a little hole with convolutions of delicate skin turning inwards, very much like what your own ear would be if you had none,—I mean, if all of it that lies above the level of the head had been removed, leaving no trace. No one who looks at the little hole could fail to see that it is an ear, highly organized—an ear for music; at least, I found it so among the finches I have examined; I know not if a simpler structure is evident in the ear of a rook or a peacock.

"The feathers are so planted round a bird's ears, that however ruffled or wet, they can't get in—and possibly they conduct sound. Birds have no need of ears with a movable cowl over them, to turn and twist for the catching of stray sounds, as foxes have, and hares, and other four-footed things; for a bird can turn his whole head so as to put his ear wherever he pleases in the twinkling of an eye; and he has too many resources, whatever bird he may be, of voice and gesture, to need any power of ear-cocking to welcome his friends, or ear-flattening to menace his foes.

"The long and the short of it is, that we may as well take the trouble first to look for, and then to look at, a bird's ear—having first made the bird like us and trust us so much, that he won't mind a human breath upon his cheek, but will let us see behind the veil, into the doorless corridor that lets music into the bird-soul."

[1] [See above, § 114, p. 103.]

154. Next; the physician[1] (over whom, to get the letter out of him, I had to use the authority of a more than ordinarily imperious patient) says,—

"Now for the grebes lowering themselves in water (which Lucy said I was to tell you about). The way in which they manage it, I believe to be this. Most birds have under their skins great air-passages which open into the lungs, and which, when the bird is moving quickly, and consequently devouring a great deal of air, do, to a certain extent, the work of supplementary lungs. They also lessen the bird's specific gravity, which must be of some help in flying. And in the gannet, which drops into the sea from a great height after fish, these air-bags lessen the shock on striking the water. Now the grebes (and all diving-birds) which can swim high up out of water when the air-cushions are full, and so feel very little the cold of the water beneath them, breathe out all spare air, and sink almost out of sight when they wish to be less conspicuous;—just as a balloon sinks when part of the gas is let out. And I have often watched the common divers and cormorants too, when frightened, swimming about with only head and neck out of water, and so looking more like snakes than birds.

"Then about the Dippers: they 'fly' to the bottom of a stream, using their wings, just as they would fly up into the air; and there is the same difficulty in flying to the bottom of the stream, and keeping there, as there would be in flying up into the air, and keeping there,—perhaps greater difficulty.

"They can never walk comfortably along the bottom of a river, as they could on the bank, though I know they are often talked of as doing it. They too, no doubt, empty their air-bags, to make going under water a little less difficult."

155. This most valuable letter, for once, leaves me a minute or two, disposed to ask a question which would need the skinning of a bird in a diagram to answer—about the "air passages, which are a kind of supplementary lungs." Thinking better of it, and leaving the bird to breathe in its own way, I *do* wish we could get this Dipper question settled,—for here we are all at sea—or at least at brook, again, about it: and although in a book I ought to have examined before—Mr. Robert Gray's *Birds of the West of Scotland*,[2] which contains a quantity of useful and amusing things, and some plates remarkable for the

[1] [Ruskin's friend, Dr. Dawtrey Drewitt; for whom see *Præterita*, ii. § 195 (comparing Vol. XXIV. p. xxvi., and, in this volume, p. 255 *n.*).]

[2] [For another reference to the book, see above, p. 115. The quotations here are from pp. 71, 72.]

delicate and spirited action of birds in groups,—although, I say, this unusually well-gathered and well-written book has a nice little lithograph of two dippers, and says they are quite universally distributed in Scotland, and called "Water Crows," and in Gaelic "Gobha dubh nan allt" (which I'm sure must mean something nice, if one knew what),[1] and though it has a lively account of the bird's ways out of the water—says not a word of its ways *in* it! except that "dippers everywhere delight in *deep* linns and brawling rapids, where their interesting motions never fail to attract the angler and bird-student;" and this of their voices: "In early spring, the male birds may be seen perched on some moss-covered stone, trilling their fine clear notes;" and again: "I have stood within a few yards of one at the close of a blustering winter's day, and enjoyed its charming music unobserved. The performer was sitting on a stake jutting from a mill-pond in the midst of a cold and cheerless Forfarshire moor, yet he joyously warbled his evening hymn with a fulness which made me forget the surrounding sterility."

Forget it not, thou, good reader; but rather remember it in your own hymns, and your own prayers, that still—in Bonnie Scotland, and Old England—the voices, almost lost, of Brook, and Breeze, and Bird, may, by Love's help, be yet to their lovers audible. Ainsi soit il.

BRANTWOOD, *8th July*, 1881.

[1] [It means "black bird of the stream."]

(ADDED IN THIS EDITION)

# LECTURE ON THE CHOUGH[1]

156. WE are to-day to examine specially what kind of thing a bird's beak is.[2] Next to the body and wings, the head of the bird is to be thought of in completeness; for the beak is in fact a prolongation of the head, and the character, power, and expression of the bird depend chiefly on the relation of the eye and crest to the bill. But the manner of the bird's life is more securely shown by its beak, which is to be the principal subject of our present lecture.

Modern science informs us, with its usual clearness of definition and beauty of language, that we may consider the bill in regard to its figure; that is, its length, breadth, and direction; that a bill is called short when its length does not equal the space between the nostrils and the nape of the neck, and that when it exceeds the length of the head it is designated as long. But you will not find, in any book that I know of, a clear and simple account of the way any single bird uses its beak, and of the strain or wear and tear to which the several parts of it are liable. This is the sorrowful fact even with respect to the birds in which the grotesque form of the beak would seem to prompt question of its reason, as the first of all points in the bird's history. I have one large department of a considerable library now stocked with ornithology, and I cannot by any industry discover why a spoonbill's bill resembles a spoon, or a razor-bill's bill a razor;—why the puffin's should be ribbed, or the hornbill's horned.

157. I have chosen the Chough for illustration to-day chiefly because, next to the Eagle, it was the most interesting of all birds to the Greeks, connecting as it does the great land-group of the Pies with the seagulls. It is the sea-crow of Homer; and the form of its beak, and the associations connected with it, have had a most singular influence on the mind and thoughts of men. Of all birds, the Picæ have the most generally helpful beaks. They can pull or pierce with them, fence finely, steal dexterously, build artificially, and talk intelligibly. An eagle can only tear flesh, cannot produce any architecture to speak of, and cannot converse, but only scream; while a parrot cannot strike, but only pinch; but a pie can do nearly anything he likes, and turn his beak with his mind to all purposes.

The English word, founded on the Latin Bucca, the Italian Bocca, and French Bouche, is connected also through the French Becquer and English

[1] [Delivered at Oxford on May 9, 1873, being the third lecture of the course as delivered.]

[2] [See *Love's Meinie*, § 19: "we can learn from the chough what a beak is."]

Peck with the first syllable of the Latin Picus and Pica, whence it has ascended and descended, in the vicissitudes of language, into so many associations, mean and magnificent; and from the picking and stealing of the Catechism, rises at last into the grandest of names for a mountain.

But for the first syllable of those two words, Picus and Pica, I must refer you to Professor Max Müller,[1] for I find myself wholly stopped by the confusion between speck and speckle and pingo and pictus, only as a pictor I must contend, no less in philological respect for the first syllable of the name of my profession than in mythological honour to the stories of the woodpecker and the magpie, for the maintenance in pictorial ornithology of the order of Picæ.[2]

158. The woodpecker and magpie!—the speckled bird and the painted—there they are for you, side by side.[3] This, I should say, is of all woodpeckers the speckledest. He looks as if he had been made out of a fir-cone, because he lives among fir-cones, and eats their seeds. But you must not think, therefore, he ever *was* a fir-cone. But this painted bird—this Pica—is a far more notable one. This black and white thing, this piebald creature, double coloured, double minded, that does not know its own mind nor its own business, that wants always to mimic other minds, and peep into other business. There are higher orders of animals like it, somewhat, as we all know.

It, therefore, I gave you, as the representative of the group. It stands for all of them in our brief list[4]—hawks, parrots, pies, sparrows, pheasants, gulls, herons—yet it is not the bird whose painting or discolouring most struck the mind of the augurs and prophets by birds. It was the painting *all over*—the painting with black, that was most notable to them; ought it not to be so to you also? Suppose you had never seen one of the pie kind—never a jackdaw, crow, or raven—but that you were familiar with linnets, yellow-hammers, goldfinches, robins, and the like. And suppose you had a crowd of these every day at breakfast before your window, and coming down one sunshiny morning found all your yellow-hammers and goldfinches gone black, and a row of coal-black robins, like Sisters of Charity, *walking* gravely, instead of hopping, on the gravel walk, you would fancy your birds had got painted, that somebody must have been playing tricks with them. Why in the world should a bird, of all creatures, ever be black, and, as it were, tarred as well as feathered by Nature? The Greeks and Latins felt this acutely. "They can't always have been black," they thought; something must have changed them from white to black! They are "painted birds."

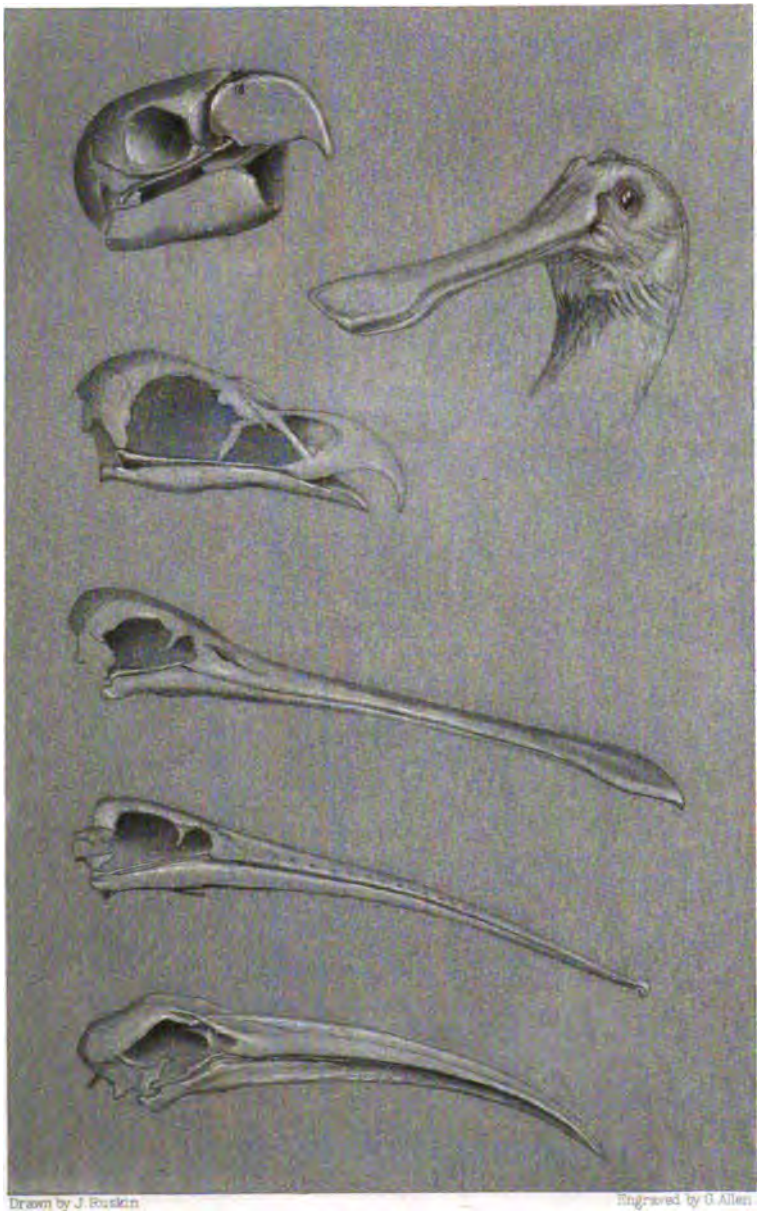
Then farther, this unbirdlike chattering of theirs—this mischievousness. That can't be natural, thought the ancients. And you get the fable of the Pierides, and in English another branching association of meaning in the word Pie.

[1] [That is, as to a fellow-professor; the word is not discussed in Max Müller's writings.]

[2] [Compare § 55, above, p. 52; and *Eagle's Nest*, §§ 188, 189 (Vol. XXII. pp. 249, 250).]

[3] [Here Ruskin probably showed stuffed specimens: see the Introduction, above, p. xxx.]

[4] [The list is in § 88; above, p. 79.]




"Development." Short noses into long.

163. Then, the beautiful form of this beak takes their fancy, and anything that is finished with a slightly bent, sharp point of metal, or other hard substance, they say is finished with a "corone," especially the bow. Compare the χρυσέην ἐπέθηκε κορώνην[1] of the bow of Pandarus with the beautiful verses in the *Odyssey*, where of the failing suitors, each, as he cannot bend the bow, lays the arrow down beside its "corone,"[2] and then you get the metaphorical phrase in Lucian, to set a golden "corone," or end, upon a perfect life.[3] Then giving the three notions of finish, of curvature, and of precious metal, you get the Latin corona, and the word in all languages since of some importance—Crown.

Just think what a train of consequences, all from the shape of the beak of the red-legged crow!

Now observe farther, wavering between the sense of the crow's beak, and of the goat's horn, and of the bow constructed of both, you get the general notion of a thing beautifully and strongly bent,* and therefore of the entire form of a boat or ship, either hollow, undecked in the Homeric times, and therefore actually like the upper mandible of a bird's beak; or decked and flat on one side, like the shaft of the bow.

164. And now you must note the reticulation and inweaving of the ideas very carefully. First, then, to show you how exactly like a bird's beak may be to a boat, I take the hollower and lighter structure of the swallows. This is an enlarged drawing of the upper mandible, which I will place upside-down, and you see it at once becomes a beautiful end of a gondola. Note in passing that this catching-point at the end distinguishes the beak of the true swallow from that of the house-martin. Hence, then, you find Homer calls his ships habitually bent ships—"coronides."[4] Now, at each end of these bent ships there was, in later time, a highly decorative corone, or finish. At the stern the ἄφλαστον, aplustre; at the bow the bent swan's or goose's neck, the χηνίσκος; and then, in ships of war, below the cheniscus, and close to the water, the ἔμβολον,[5] afterwards called *rostrum* by the Latins, but never ῥάμφος by the Greeks.[6]

Now to be quite clear about these three parts of the ship:[7] the essential ones to all are the two finishing ornaments of stem and stern—the cheniscus and aplustre—but especially the aplustre, which protects the steersman, so is the sign of civil naval power, as the ἔμβολον of military; so that to express the perfect command of the steersman on ships moved by

* It is to be remembered the Greeks had the art of bending ivory, now lost. See Müller's account of chryselephantine work.[8]

---

[1] [*Iliad*, iv. 111.]
[2] [*Odyssey*, xxi. 138.]
[3] [*Peregrine*, 33: χρυσῷ βιῷ κορώνην ἐπιθεῖναι.]
[4] [See, for example, *Iliad*, i. 170; *Odyssey*, xix. 182.]
[5] [For the ἔμβολον, see above, § 66, p. 61.]
[6] [ῥάμφος = the crooked beak of birds, which is the primary sense of the Latin *rostrum*.]
[7] [For further particulars the reader may be referred to *Ancient Ships*, by Cecil Torr, 1894.]
[8] [See p. 309 of *Ancient Art and its Remains*, by C. O. Müller, translated by J. Leitch, 1847.]

sails instead of oar, you get either the ἄφλαστον (aplustre), or the rudder, put into the hand of Athena, as the queen of the winds.[1] But when you have the power of Poseidon to be expressed, the stroke upon the wave by the oar becomes of most importance. We do not, perhaps, usually consider what force and precision of guidance there was in the oars of a trireme, and how much more, in the shock of battle, depended on the order of the κελευστὴς[2] to the rowers, than on the skill of the steersman. And then the whole force of the ship is to be represented by the *embolon*, not by the *aplustre;* and then, when

> "Adductis spumant freta versa lacertis
> . . . totumque dehiscit
> Convolsum remis rostrisque tridentibus æquor,"[3]

the two characters of governed speed and of striking power become the attributes of the ship which the Master of the seas protects it in bestowing; and Poseidon has therefore the dolphin in one hand and the trident in the other, at once the thrusting and guiding force of the τρίαινα, the goad of the sea-chariot, and the pitchfork which heaves or thrusts sand or stones, as, in the twelfth Iliad, of the Greek walls;[4] so that the ship's beak takes its triple form from that of the trident entirely as a poetical and mythic, not naval, condition.

165. I missed out of the verses of Virgil which I have just read, but missed only that I might afterwards draw your special attention to them, the words "infindunt pariter sulcos." We still speak, till the phrase is dead from too frequent use, of a ship's ploughing the sea; but have you considered how much more like a ploughshare the rostrum was than our stern? Hence you have the Poseidon-Georgos—Poseidon-George—a god we ought to know something of, with the plough, the yoke, and the prora. In this triply-toothed weapon, however, half under water, although the Latins call it *rostrum*, the true feeling of the resemblance to birds is lost. But in the *aplustre* another kind of resemblance introduces itself. Its ornament gradually springs up into a kind of crest or gradually increasing plume, which to the first idea of the chough's beak adds that of the hoopoe's crest. And through the whole comedy of the "Birds"[5] you will find these two ideas of head-plume and beak variously played with in the figures of the ἔποψ, κορυδός, and Περσικὸς ὄρνις (cock, with cock's comb);[6] and so gradually the corona—τιάρα or κυρβασία—is accepted for a head-dress, rising up towards the front, and returning back in successive plumes or points.

166. Now you cannot but have noticed how the ancient and practical

[1] In *Odyssey*, ii. 417, Athena takes her place in the stern (though it is not said that she steered).]

[2] [The man who by his voice or by signs gave the time to the rowers.]

[3] [Virgil: *Æneid*, v. 141–143 ("the upturned waters froth as the arms are upward drawn, and all the sea, uptorn, is divided by the force of the oars and the three-headed bows").]

[4] [*Iliad*, xii. 27: Poseidon, with his trident (τρίαιναν) in his hands, led the way, washing away the deep foundations laid with logs and stones.]

[5] [For other references by Ruskin to the *Birds* of Aristophanes, see above, p. 42.]

[6] [See, *e.g.*, for the ἔποψ (hoopoe), *Birds*, 94, 99; for the κορυδὸς (crested, or tufted lark), 472–475; and for the cock (called "the Persian bird"), 485.]

idea of the helmet crest, consisting of a ridge adorned with horsehair, passes into that of an upright decorative plume in the Middle Ages. But the dress of the bare head had passed long before, in the same manner, from the first practical idea of a fillet, simply knotted, to that of an ornamental and lofty crown, pointed over the forehead. But between these two there came the idea of the kind of fillet uniting the characters of both—the loose garland, decorative round the whole head, but resting on it as a loose wreath, not set upon it as a crest or crown.

And now, observe, the groups of connected words are so involved that if you think of the *use* of words only there's no end to the confusion. Suppose you were to try merely, with your dictionaries and quoted passages, to ascertain the relations of the group of words centralized in *crest*. Just hear them:—

Coronis, cornice (*ἀετός* and fastigium, for byplay)
*κρόσσαι*, *κροσσοί* [battlements, tassels]
*κόρση*
*κάρα*
Crinis
Crista, coma, comb; and
Corona.[1]

But mass all these together under the general idea of lofty ornament or defence of the head, whether the human bow or the mountain cliff on

[1] [Ruskin referred these etymological points to Dr. A. S. Murray (for whom compare *Fors Clavigera*, Letter 83, § 14), who replied as follows (British Museum, 14th May, 1873):—

"The Latin word corona is, no doubt, of the same root as the Greek *κόρρη* or *κόρση*=side of forehead, or temple, but while the Romans in giving a name to their head ornament kept prominently the fact of its being a *head* ornament, the Greeks named their head ornaments only in such a way as to express their shape or material. The *diadema* was a plain ribbon used by men to keep the hair from blowing in the wind, and by women to keep their wavy tresses forward on the temples. The *tainia* was worn by women to keep the hair back from the brow, and was also quite plain. The *ampyx* was for the same purpose, but more ornamental. The *stephane* was an ornamental diadem. The *stephanos* was what we should call a crown of even width all the way round, and not used for the purpose of tying. The athletes' prize wreath was a stephanos. The *splendone* (=sling) was a sling-shaped ornament worn by women, the broad part supporting the knot of hair, like a net, behind. The *polos* and *kalathos* were high crowns in the shape of a corn measure or a basket.

"On the other hand, the Greeks retain the root of *κόρρη* or *κόρση* in their word for a helmet, *κόρυς*, *κόρυθος*; in their word for battlements which crown a wall, *κρόσσαι*; in the word *πρόκροσσοι*, and in many others.

"Your difficulty, as I understood you, was to find some connection between the Latin corona and the Greek *κορωνίς*, which originally described a thing bent or curved like the beak of a crow, and latterly came to mean a wreath. I am puzzled to find any connection between a wreath or a crown, and a crow or its beak. But it is certainly curious that the word *πρόκροσσοι* (from *κρόσσαι*=battlements, from which the mural crown is derived which Cybele as goddess of citadels wears) is associated with beaks, in three of the four instances of it given in Liddell and Scott, and by them, I think, not very well explained:—(1) Homer describes the ships as drawn up on the beach, *πρόκροσσαι*, like battlements, but at the same time with their beaks landward, I should think. (2) Herodotus describes ships as ranged, *πρόκροσσαι ἐς πόντον*,

which Rhea Cybele sets her mural crown;[1] then mass together, similarly, the words vitta, infula, tænia, *διάδημα*—all sacred bindings of the hair—restrictive, not defensive—the bonds of sacrifice, of purity, and of duty; and separate from all these the great word *στέφανος*—the crown of joy, of fulfilment, of peace, or of death.

167. For these three distinct kinds of wreath there are three proper names. The simple fillet, as I have before told you, is the *διάδημα*—the binding thing, the crown of duty. Secondly, the crown of rejoicing, of fulfilment, or of death—the wreath of flowers, or leafage, or even fruit, thrown upon the head in luxuriance, as a falling rain of flowers. Recollect then these verses of Pindar:—

> χαίρων δὲ καὶ αὐτὸς
> Ἀλκμᾶνα στεφάνοισι βάλλω, ῥαίνω δὲ καὶ ὕμνῳ.
>
> καὶ τὸν Ἰσθμοῖ καὶ Νεμέᾳ στέφανον
> Μοίσαισί τ' ἔδωκ' ἀρόσαι.[2]

Not a *διάδημα*; not a *τιάρα* or *κυρβασία*.

This is the garland, guirlande, of the English and French; the ghirlanda of the Italian, from which the Florentine Ghirlandajo has his name;[3] to this day, in South Italy, you may see the peasant youth twist the vine round their heads in luxuriant branches, as gracefully as ever antique Dionusos.

Now the proper Greek word for this crown is *στέφανος*, the abundant thing, from *στέφω*; and it is as the crown of delight and victory that it is used in the mockery of Christ. The soldiers plaited not a *διάδημα*, but a *στέφανος*, a deep-clustered and abundant garland—but of thorns; and Jesus came forth as one crowned for a joyful victory, or for death—*φορῶν τὸν ἀκάνθινον στέφανον*.[4]

You have, then, the diadem, for duty; the stephanos, for rejoicing; the *κυρβασία*, for pride; then, finally, the Latins, seeking power, not gladness, change the crown of joy into that of power or authority—the corona, set

with their beaks to the sea. (3) Herodotus says of a vase, *πέριξ αὐτοῦ γρυπῶν κεφαλαὶ οἱ πρόκροσσοι ἦσαν*;[1] that is, the heads of Gryphons were placed round the rim, as we now find them, rising up from it at equal distances like the heights of a mural crown. I can only suppose that the beak of a ship was regarded as a battlement, and derived its name of *κορώνη* from the root *κόρη*, and that from the ship the name for a bird's beak and even for a crow was derived."]

[1] [See Lucretius, ii. 606 *seq.*:—

> "Muralique caput summum cinxere corona
> Eximiis munita locis quia sustinet urbes," etc.

Compare Virgil, *Æneid*, vi. 785, and Ovid, *Fasti*, iv. 219.]

[2] [*Pythia*, viii. 57 ("And with joy I myself too throw garlands on Alcmæon's grave, and shower it with song"); and *Nemea*, x. 26 ("he won crowns at Isthmos and Nemea, and gave the Muses something to plough").]

[3] [See Vol. XXII. p. 341.]

[4] [John xix. 5.]

---

[1] [The references are to *Iliad*, xiv. 35; Herod. vii. 188, and iv. 152.]

high on the head, not thrown loose round the head.[1] And the notablest fact in the whole history of symbolic decoration is that these three crowns, definitely separate and every one marked in character, are the earliest head-dress of the priests and kings of Greece. In that most precious of all collections of Greek Art, which, in trying to drive a bargain, we let go to America,[2] every priest's head-dress had the three fillets—lowest, the diadema of ivy, the binding thing; above that, the narcissus of joy and rest, in one flower;[3] above that, the corona of olive.

And yet the Greeks never, except in their crowned cities, Coronea and the like, fasten on the idea; but to the Romans of the fortified crown, set high, corona takes both ideas. And then, in the Middle Ages, you may trace in the form of the crown absolutely the expression of the kind of authority which the king sought. First you get the simple fillet—like the iron crown of Charlemagne, royalest of all—the diadem; then this buds into the στέφανος and springs up into a wreath of fleur-de-lis, as the royal power becomes either benignant or pleasurable; and at last, where personal pride is chiefly felt—and even our Prince Harry, less thinking of the loss of a good English soldier to England than of his own fame by his death, says to Percy, "All the budding honours of thy crest I'll crop to make a garland for my head"[4]—the στέφανος, so cruelly worn, changes into the proud corona; and the too much lifted or triple tiara of kingship or priesthood expresses the declining souls in Europe—of the princes who wore the corona of their own pride, instead of the στέφανος of their people's rejoicing.

168. So much for the meaning and form of the beak. Now I must give you to-day some of the mythology, also, of beak and plume—of the loquacity and the blackness—mythology of Pica, κίττα, κολοιός, and κορώνη,[5] so far as it bears on modern life. I am sorry to say, hardly any other mythology than that of the κίττα, κολοιός, and κορώνη *does* bear on modern days—the chattering, and the croaking, and the blackness—externally; the mockery and the feeding on carrion, in the spirit.

Take the 480th verse of the *Birds*:—

οὐκ ἀποδώσει ταχέως ὁ Ζεὺς τὸ σκῆπτρον τῷ δρυκολάπτῃ·

(Shall not Jove, then, swiftly surrender his sceptre to the woodpecker?)

—and you have the epitome of modern theology, and the bourne of modern hope—Raven's-bourne.

169. I must rapidly put you in mind of the main myths.

The κόραξ, *corvus*, raven, was snow-white—swan-white. It betrayed the guilt of Coronis to Apollo, and was made black for ever.[6] It is the seeker-out of, and feeder on, death, moral or physical.

The κορώνη, cornix, was a maiden, daughter of Coroneus, changed by Athena into the chough, sea-crow, to save her from the pursuit of the

[1] [Compare *Ariadne Florentina*, § 219 (Vol. XXII. p. 450).]
[2] [The collection of Cyprian antiquities formed (1865–1870) by Count Luigi Palma di Cesnola, now in the Metropolitan Museum of Art, New York.]
[3] [Compare *Val d'Arno*, § 252 *n.* (Vol. XXIII. p. 147).]
[4] [*1 Henry IV.*, Act v. sc. 4.]
[5] [The jay, the jackdaw, and the sea-crow.]
[6] [For the authorities for this myth, see *Eagle's Nest*, § 189 (Vol. XXII. p. 250 *n.*).]

sea-gods. She betrayed the birth of Erichthonius. Athena cast her off, and took Nyctimene for her favourite instead.[1]

Finally, Coronis herself, daughter of Phlegyas, is slain by Apollo for her infidelity; but he saves her child Æsculapius, as Zeus saves Dionusos, the child of Semele.

Thus both the mothers of Bacchus and Æsculapius perish for impatience, but Semele for noble impatience, Coronis for ignoble.

She is beloved by Apollo, and is not content with and will not wait for him; she is the type of the

φῦλον ἐν ἀνθρώποισι ματαιότατον
ὅστις ἀισχύνων ἐπιχώρια παπταίνει τὰ πόρσω.[2]

You disdain the common sunshine, and you light gas. That is the literal infidelity of Coronis. You won't do your work by common daylight, but pay dividends to gas companies. You won't drink the common stream, but pay twenty-pence or twopence for beer.

His mother,[3] Coronis,* perishes by fire for her impatience; but she could not help being impatient, for she is the daughter of Phlegyas, the fiery red or burning king, who, upon finding what *he thinks* her fault, in his fury sets fire to Apollo's temple,[4] and in Dante's *Inferno* is therefore the ferryman on the lake of Anger or Discontent.[5]

170. Now you must have a little patience with me, for this myth branches in a cuttlefish sort of way—has ever so many arms at once. Phlegyas is indeed the fiery king, but the king of fire that turns things black. Not of the fire that hallows or warms, but of the fire that withers, destroys to a cinder. The Blackening Fire King is his proper name, and therefore you find, in Hesiod's account of the armour of Herakles, that the feathers of his fatal arrows are winged with the plumes of the black fiery eagle:—

μόρφνοιο φλεγύαο καλυπτόμενοι πτερύγεσσιν.[6]

Not Jove's eagle, but the black vulture—Phlegyas vulture,—its feathers giving the very poisoned fiery death by which Herakles himself was afterwards to die.

Now this king of black-hot anger is spoken of by Pausanias as representing his whole nation, who, making war on the Delphians, are destroyed by lightnings and grievous earthquake;[7] and the Delphians (in their war

* τὸν ἐγείνατο δῖα Κορωνίς.[8]

---

[1] [Ruskin here follows Ovid (*Metamorphoses*, ii. 550–590).]

[2] [Pindar, *Pythia*, iii. 21 ("a tribe most foolish among men, of such as scorn the things at home and gaze on things afar off"): at the beginning of this ode the story of Coronis, beloved of Apollo, but impatient for other embraces, is told. She was slain by Artemis at the instigation of Apollo.]

[3] [That is, the mother of Æsculapius.]

[4] [This incident is given by Servius in his commentary on Virgil, *Æneid*, vi. 618.]

[5] [*Inferno*, viii.]

[6] [*Shield of Herakles*, 134.]

[7] ["In course of time the reckless and daring Phlegyans . . . began to harry their neighbours, till at last they actually made a raid on the sanctuary at Delphi. On that occasion Philammon led a picked body of Argives against them; but he fell in battle, he and his men. . . . But the god utterly overthrew the Phlegyan race by continual thunderbolts and violent earthquakes" (ix. 36).]

[8] [*Homeric Hymn* to Æsculapius, 2.]

with them) are under the captainship of Philammon, the son of Apollo. Now if you look back to my lecture on the Halcyon,[1] you will find I named the myth of Philammon and Autolycus as the centre, together with Pindar's story of the infidelity of Coronis, of all the traditions respecting the black and white Picæ. For Autolycus is the cunning which *clouds* white into black, as Phlegyas is the cruelty which *consumes* white into black. One is opposed to Apollo as to the light which *detects*, the other to Apollo as to the light which *heals;* and the mothers of both are slain by Diana;[2] and the temper of both is represented always in after-mythology as of Athena by the Owl, so of Phlegyas by the Raven, and of Autolycus by the Magpie.

171. You partly laugh at, partly disbelieve, the lower or ludicrous expression of so deep a perception. Yet the thing is always so in myths of real value. They reach up and down through the whole of life. The visible thing is itself a myth, you may think, as you look at the raven itself, in whatever direction you choose. You may think, and ought to think, sometimes lightly enough of it, and remember only, if you will, Walter Scott's pet raven,[3] or Dickens's, who "tore up and swallowed in fragments a staircase of six steps and a landing";[4] or you may think, and sometimes ought to think, of the prophet's famine, and the wise man's curse: "The eye that despiseth his father, and refuseth to obey his mother, the ravens of the valley shall pick it out, and the young eagles shall eat it."[5] Reading the myth of Autolycus[6] you may either think of the pedlar with the village maidens, in *The Winter's Tale*,[7] or of the toothed helmet that covers the face of Ulysses when he steals the white horses of Thrace, and leaves their king in the death-slumber and blackness of darkness instead of the morning light.[8]

172. And you cannot so much as hear me name the magpie without a smile. Yet I can show you ground for thinking with some seriousness of it. When I spoke, in last lecture,[9] of the vile industries and vicious curiosities of modern science, I spoke of her vile industries, meaning that there is no kind of explosive compound or of machine for the multiplication of death which our *science* is not eagerly and ingeniously producing in perfection. That is her Phlegyas business—setting fire to Apollo's temple, and spreading feasts for the raven. Now what is her Autolycus business—her vicious *curiosity*? Take your Ovid and read the "Song of the Pierides." I give it you first in English—Maynwaring's. I'm afraid

[1] [See *Eagle's Nest*, § 189 (Vol. XXII. p. 250).]

[2] [Chione, mother of Autolycus and Philammon, was killed by Artemis for having found fault with the beauty of that goddess (Ovid, *Metamorphoses*, xi. 300 *seq.*). The father of Phlegyas was Ares; Pausanias (ix. 36) gives the name of the mother as Chryse; Apollodorus (in some readings) as Dotis (iii. 5, 5); but the editors fail to trace any legend stating that she also (like Coronis and Chione) was slain by Artemis.]

[3] [See Captain Basil Hall's account of "Maître Corbeau" in Lockhart's *Life of Scott*, vol. v. p. 410 (ed. 1).]

[4] [See Dickens's preface to *Barnaby Rudge*.]

[5] [Proverbs xxx. 17.]

[6] [For other references to it, see Vol. XVII. p. 39; Vol. XIX. p. 323.]

[7] [Act iv. sc. 3.]

[8] [For the toothed helmet, see *Iliad*, x. 263; for the slaying of the horses of Rhesus, *ibid.*, 490 *seq.* Their white colour is stated by Dolon (*ibid.*, 437).]

[9] [The lecture on the Swallow: see above, p. 56.]

we're always a little bit more at home in that than the Latin,—I'm sure I am:—

> "Then rises one of the presumptuous throng,
> Steps rudely forth, and first begins the song;
> With vain address describes the giants' wars,
> And to the Gods their fabled acts prefers.
> She sings, from earth's dark womb, how Typhon rose
> And struck with mortal fear his heavenly foes;
> How the Gods fled to Egypt's slimy soil,
> And hid their heads beneath the banks of Nile;
> How Typhon, from the conquer'd skies, pursu'd
> Their routed Godheads to the sev'n-mouth'd flood;
> Forc'd ev'ry God, his fury to escape,
> Some beastly form to take, or earthly shape.
> Jove (so she sung) was chang'd into a ram,
> From whence the horns of Libyan Ammon came.
> Bacchus a goat, Apollo was a crow,
> Phœbè a cat; the wife of Jove a cow,
> Whose hue was whiter than the falling snow.
> Mercury to a nasty Ibis turn'd,
> The change obscene, afraid of Typhon, mourn'd;
> While Venus from a fish protection craves,
> And once more plunges in her native waves."[1]

What think you of that for a prophecy of your great discovery that the pretty vertebrated animals, whom you used to be foolish enough to take for goddesses, are only developed Ascidians?[2] I'll trouble you to recollect just these two short bits of the Latin:—

> "Delius in corvo, proles Semeleia capro, . . .
> Pisce, Venus, latuit."

You have in them modern music, modern merriment, modern love; and recollect that these are the forms of the degradation of each god's nature, which become their hiding-places.

173. And now hear—against the Song of the Pierides—that of the Muses. They choose Calliope to represent them, and you expect, if you read for the first time, that her song will be a hymn in exaltation of the gods, as the Pierides in degradation of them. Not so. The Song of Calliope is the praise of the work of one goddess only; and that, her work on earth, and even her distress on earth, but a beautiful distress:—

> "First Ceres taught the lab'ring hind to plow
> The pregnant earth, and quick'ning seed to sow.
> She first for man did wholesom food provide,
> And with just laws the wicked world supply'd:

[1] [*Ovid's Metamorphoses in Fifteen Books, Translated by the most Eminent Hands:* London, 1717, book v. by Arthur Maynwaring, p. 157. The passage here given translates book v., lines 318–331, the Latin quoted by Ruskin being from lines 329–331.]

[2] ["*Ascidian*, pertaining to the Ascidia, a group of animals belonging to the tunicate Mollusca, considered by evolutionists to constitute a link in the development of the Vertebrata" (Murray's *New English Dictionary*). Compare (in a later volume of this edition) "The Range of Intellectual Conception proportioned to the Rank in Animated Life," § 5.]

All good from her deriv'd, to her belong
The graceful tributes of the Muse's song.
Her more than worthy of our verse we deem—
Oh! were our verse more worthy of our theme. . . ."[1]

Then you have the whole story of the search for Proserpine, and power of Triptolemus;[2] that is to say, the myth of agriculture, and flowers and agriculture, which the Pierides despising and abusing, they are changed into the disgrace of the groves;[3] but yet

"Nunc quoque, in alitibus, facundia prisca remansit,
Raucaque garrulitas, studiumque immane loquendi."[4]

174. Now, could you possibly define more accurately the spirit of modernism, the scorn of sentiment, the scorn of agriculture, the delight in degradation, the denial of the power of the gods, the analysis of brutal forms—the *studium immane loquendi*—and, finally, the knavery of theft, and cleverness of Autolycus instead of Hermes?

We of all races of the world have the least right to discard the order of Picæ. Here they are, then, for you, all in a row:—

Raven.
Crow.
Chough.
Jackdaw.
Rook.
Magpie.
Jay.
Nutcracker.

175. But there is still another form of the opposition of the Pierides to the Muses which I must not pass. To seek to know what we cannot usefully know is indeed a fatal form of it, but to seek to say what we cannot understandingly say is a more fatal still. Magpie curiosity in men is mischievous, still they may gain something by it; but magpie *talk* in men—which of us ever gained anything by that? How much there is now among us, on all matters, you are partly conscious; but the worst is that of which you are unconscious, and which has the appearance, even to yourselves, of being quite beautiful and honest and pathetic talk. I will take a single instance in a very grave matter.

The curiosity of modern literature, for instance, respecting the collection of books which we vulgarly call the Bible,[5] leads you to ascertain,

[1] [*Ovid's Metamorphoses*, p. 158, translating book v., 341 *seq.*]

[2] [For other references to the story, see *Queen of the Air*, § 11 (Vol. XIX. p. 304), and "Notes on the Educational Series" (Vol. XXI. p. 113).]

[3] [*Nemorum convicia picæ:* at the end of book v., line 676.]

[4] ["The same their eloquence, as maids or birds,
Now only noise, and nothing then but words."]

[5] [For Ruskin's statement of different views of the Bible, see *Time and Tide*, §§ 34 *seq.* (Vol. XVII. pp. 348–350); and for its value as a book, *Bible of Amiens*, ch. iii. § 51.]

within some degree of probable approximation after the study of some twenty or thirty years, that the epistles of St. Paul were written by Simon Magus, and the Psalms of David arranged for alternate voices by Saul and the Witch of Endor. Well, to that scientific result a certain value I admit, even a very great value, is to be attached, provided you remember always that it is a quite subordinate result, and that the curiosity becomes vicious when it leads you to occupy any great part of the energy of your life in weighing the probabilities of its being this person or the other who wrote, say, the 13th chapter of Corinthians, or the 15th Psalm, without taking the smallest pains to understand a single word of either of those documents. Supposing that either of them are precious documents to you —that you find they bear on your life, and are wholesome for your thoughts—then a farther light may perhaps be thrown on them if you find out how they chanced to be originally written. But don't be curious about it. Be curious only to determine whether a given piece of literature is or is not written for you, and that you attend to it if it be. I named the 15th Psalm because it is the most precious document I know written in any language bearing on universal life and conduct; but there is one related intimately to our present subject, the 55th,[1] which cannot—and God be praised that it cannot—be read with profit or understanding by so much as one man in a thousand. For the 55th Psalm is written for, and can only be understood by, men who have passed through an extreme of mental suffering, which, to begin with, few are capable of feeling, and of those who are capable, few are appointed to feel.

176. I have just noted[2] for you that the opposition between the dove and raven extends through every expression of human mind; from the earliest trace of it in the east, down to the Renaissance architecture of Venice, from which I chose the 20th plate of wall decoration of Ca' Trevisan[3]—the white loving bird expressing peace and life; the black and devouring one, restlessness and death; at first physically, but far more deeply, mental peace, opposed to mental pain and death, so that the raven and vulture in their uttermost power feed on the living, not the dead—as in the myth of Prometheus; while the spirit of Consolation, the Comforter, rests, in the form of a dove, on the head of the Christ,[4] who is to bring on earth peace and good pleasure, not towards men, but among them and in them.[5] Now the 55th Psalm is the carrying out of this opposition in the mind of a single person; it is the cry of a man in an extreme of mental pain, and conceiving at the same time the extreme of mental peace. Any of you, who have ever known any of the higher states of satisfied innocent affection, know that the special condition of it is its rest; that it is not so much the joy of it as the peace which distinguishes true love from false; and that this law extends even down

[1] [See Ruskin's remarks on the two Psalms in his notes to Sir Philip Sidney's version (*Rock Honeycomb*, in a later volume of this edition).]

[2] [See above, § 159, p. 154.]

[3] [See *Stones of Venice*, vol. i. (Vol. IX. p. 425).]

[4] [Matthew iii. 16.]

[5] [Luke ii. 14: compare *Val d'Arno*, § 253 (Vol. XXII. p. 148), where Ruskin quotes the Greek and again notes the mistranslation in the Authorised Version. The Revised Version has, "And on earth peace among men in whom He is well pleased."]

to such an apparently physical condition as the being able to draw an entirely full deep breath or sigh in quietness of heart. Well, the utmost contrary of this—the utmost disquietude and trouble of heart—is in the sense of being hated; above all, of being hated and despised by those who ought to have loved you, and of there being none to stand with you against them; the entire loneliness, and the being ill rewarded after effort to do kindness, is the grief alike of Prometheus of the Greeks and of the Master of Christians.

177. Now how very few men have ever, I say again—thanks to Heaven—felt any grief of this kind, or approaching it. How many know what it is to have so much as one real fierce enemy; how many of us know beyond that what it is to have their friends become their enemies—to feel that, so left, we stand also alone in the midst of a multitude of men who are bent on doing evil for evil's sake? Which of us know, which of us can conceive, this kind of suffering? Yet until we know it, the words of that 55th Psalm are entirely valueless to us personally. The 15th Psalm —"who shall abide in thy tabernacle"—in every syllable of it, is a definite and living guide at every instant of our day; but this from the 55th—now what business have we with words like these?[1] Now observe: as not one in a thousand of us can understand the first part of that song, not one in twenty thousand would agree with the second part. The wilderness is the very last place which a modern Englishman or Englishwoman would like to fly away to, to remain in.

178. That being the actual state of our hearts about this composition, we nevertheless think it will be pleasant to ourselves, and pleasing to God, if we sing it vociferously as magpies. But especially we will tickle our own ears with it, if possible. So, as the honest English is too dull for us, we change it into a piece of rhymed cackle to this effect:—

> "The enemy shouteth, the Godless come fast;
> Iniquity, hatred, upon me they cast.
> The wicked oppress me, oh, where shall I fly?
> Perplexed and bewildered—oh, God, hear my cry."

These improved words we fit with the best sentimental music we can, and really succeed very often in moving ourselves to magpie tears—the sort of tears that the worms lick up in the outer circle of the Inferno.[2] Having indulged ourselves in this dulcet [strain] till we have had enough, we think that on the top of the black we will put a little white, and do the painting of the Pierides as well as the singing. So as we take our ice pudding after our hot meat, we will have a little merry music after the sad, and here's a verse that will just do for it—how lucky; so we turn on the trebles, and away we go:—

> "Oh, for the wings, for the wings."[3]

[1] [Here Ruskin must have read the Psalm. It is interesting to recall that the 55th Psalm was the last word that Darnley read before his death (see R. E. Prothero's *The Psalms in Human Life*, p. 164). See also Browning's *Ring and the Book*, ii. 991–1000.]

[2] [*Inferno*, iii. 68, 69.]

[3] [For another reference to this well-known anthem, see Vol. XXII. p. 497.]

Now observe. There are many thoroughly good people who get no harm from these hypocrisies. They put true feeling to the music, though not the least the feeling of the words in question, and they get no harm. But for the shallow people—who have no feeling of any kind to give, but get whitened and blackened, feathered and tarred, into crow or magpie mockery of sensation—the mischief is endless; and the general right practice for sensible people is to sing or have sung for them nothing but what they thoroughly understand, and for the time can either sympathetically or in their own persons feel with precision and utter with veracity.

179. But now, gentlemen, I must go back to the more solemn myth—that of the raven, as the bird of death; especially death caused by anger, by power of Phlegyas.

I must again and again repeat to you that the power of art is in representing the life of things.[1] Let me assume to-day that I am speaking to you as I would to students who meant to be painters; for observe what disadvantage I am under, generally, by having to lecture on art to you who are not going to study art, but only to "effleurer" art; to take short swallow-flights, not of song,[2] but of painting; and who only dip their wings in water-colours, and so fly away. Suppose you are students of the Royal Academy, and then I can tell you, gentlemen, with all the earnestness which I ought to feel in speaking of principles that must either make or mar your fortune, that you need not particularly study the healthy or sane state of the bones of men, because nature does not often allow their bones to be put out of their places; but there is the greatest possible need for your studying and knowing the sane state of the *minds* of men, because nature *does* very often allow their thoughts to be put out of their places. And do you suppose it is not a more deadly artistic error to draw dislocated souls than dislocated skeletons?

180. You don't believe, will you answer, that there is such a thing as a soul to be drawn, or a spiritual state, either of location or dislocation, determinable by science. If that be indeed the condition of your moral philosophy, *à fortiori*, much more need is there for us, as artists, to ascertain what is needful for you of the science, since the moral philosophers do not. And now to take this one passion of anger. The proper use of the passion of anger is to strengthen us for the execution of justice when that is needful.[3] But the execution of justice on criminals is not a proper subject for art. Neither the executioner, nor the culprit, nor the guillotine, are fit subjects for you, nor, if a hundred or a thousand guilty persons have to be killed, is the massacre a fit subject for you.

But if the massacre of the guilty be not a fit subject for you, *à fortiori*, not the Massacre of the Innocents.[4] If anger in its right place—entirely just and sane anger—must not be painted, how much less anger in its wrong place—*dislocated* anger, insane anger. As, for instance: "Then Herod, when he saw that he was mocked of the wise men, was exceeding

[1] [Compare above, p. 69, and *Eagle's Nest*, § 150 (Vol. XXII. p. 223).]

[2] [Tennyson, *In Memoriam*, xlvii.:—

"Short swallow-flights of song, that dip
Their wings in tears, and skim away."]

[3] [On the subject of righteous anger, see Vol. XIX. p. 400, and Vol. XX. p. 88.]

[4] [Compare Vol. XXIV. p. 81.]

wroth."[1] Now hear Vasari praising one of the chief painters of Florence for his representation of the results of this anger:[2]—

"Of all the stories we have by Domenico Ghirlandajo, this which represents the cruel wickedness practised by Herod against the Innocents is certainly the best, since it is executed with great judgment, ability, and art. The impious determination of those who kill those poor children at the command of Herod, is rendered most clearly visible among the babes in one still hanging to the breast of its mother, while it is dying of wounds received in the throat; so that it sucks, not to say drinks, blood no less than milk."

I rather doubt, myself, even the anatomical correctness of this representation; but "this is a very striking thought," says Vasari, and he goes on:—

"There is, moreover, a soldier who has forced a child from the mother, and as he is hurrying away with it, he is killing the innocent by crushing its breast; the mother of the babe is seen hanging to his hair, which she has seized with fury, and forces him to bend back till his person forms an arch. In this group three different effects are finely displayed—one, the death of the child, who is seen to expire; another, the cruelty of the soldier, who feeling himself dragged as described, is obviously avenging himself on the infant; and the third is the determination manifested by the mother, who, seeing the death of her child, resolves in her rage and despair that the murderer shall not depart without suffering. All this is in fact more after the manner of a deeply-thinking philosopher than of a painter. There are, beside, many other passions and emotions rendered manifest in these stories, insomuch that he who examines them will infallibly perceive this master to have been among the truly excellent ones of his time."

181. Now this passage is only one of a thousand which I could read to you, proving the delight of the vulgar Italians who guided the arts of the fifteenth century, in the very passions which the Greeks utterly abhorred. No Greek painter or sculptor of the fine times ever represents λύσσα—fury.[3] Contest, yes; but anger, never. And before going farther I must ask you to notice in Dante the exquisite opposition to the power of Phlegyas which he has given in the presence of the subduing angel.[4] Phlegyas is the ferryman of Styx—of the black moat of hatred or of melancholy—the black water which is to other water what the raven and crow are to other birds; and over it there is a fog which is to other air what the air of England is now to the air of clean countries. This moat surrounds the fortress watched by the Furies; its doors are closed by the Fiends; and always observe, insanely, uselessly, they shut the doors they cannot keep shut. The angel comes to open them for Dante's entrance, and then Dante expressly says to you:—

> "Oh voi ch'avete l'intelletti sani
> (Oh, you who have your senses sane),
> Mirate la dottrina che s'asconde
> Sotto il velame degli versi strani."[5]

[1] [Matthew ii. 16.]
[2] [See vol. ii. p. 211 (Bohn). The fresco described is one of those in the choir of S. Maria Novella at Florence.]
[3] [Compare *Aratra Pentelici*, § 192 (Vol. XX. p. 339).]
[4] [See *Inferno*, canto viii. (Phlegyas), and canto ix. (the subduing angel).]
[5] [*Inferno*, ix. 61–63: "Mark well the lore concealed under close texture of the mystic strain" (Cary).]

Before the angel there is the sound of a tempest, and as of the wind breaking branches of trees—divine and irresistible anger, opposed to insane and impotent anger—but his action is calm. The destroyed souls—note the epithet "anime distrutte"; souls broken down, not condemned souls, not wicked ones, but destroyed by their own fury—are driven before him like frogs; he moves the fog from his face with his hand,[1] he strikes open the closed gates of hell with his rod, and returns, thinking apparently, Dante says, of other things of higher care.

182. Do you think there was ever a time when the doctrine hidden under these strange verses was more needed; when civilized Europe hopes to found its strength upon the "antica schiuma" of Styx[2]—the waters of Hatred, instead of waters of Comfort;[3] and when the physical expressions of darkness and rage are actually the chief aims of her most accomplished art? Is not the whole art of Gustave Doré one slimy efflux of the waters of Styx?[4] In Florence they had indeed this evil art, but they had beside it the good. You have, by Doré and Gérome, the execution, the massacre, the plague, the raven's feast in the battlefield. But who paints for you the mythologies of justice, who the dynasties of virtue?—who the principalities and powers in heavenly places?[5]—who what you can triumph in if mortal, or be purified by if more than mortal?

183. I was yesterday and the day before looking over our Art Exhibition of this year. May I ask any of you, who have also been there, what national joy, fame, or faith you find expressed on its walls? There is much to be sorrowful for in mere technical matter, but I will only press on you these three close and simple questions:—

(1.) Observe, there is no painting of any great national festival. The Derby Day won't paint twice, somehow.[6]

(2.) There is no painting of any great national deed. You have done nothing this year that you are proud of, but you have ate much humble-pie, and paid a large fine.[7] You can't paint yourselves paying that over the counter.

(3.) There is no painting of any great national faith. You can't paint woodpeckers in any dignified position in cloud-cuckoo-town.[8] So there you are. What have you got to paint? You are a great naval power, forsooth, so you must have something of the sea; you have, therefore, a shipwreck on the Goodwins, some well-painted sea beaches and bays, and all that was left of the homeward-bound—a mast floating, with a dead girl and a

[1] [Compare Vol. V. p. 311, where Ruskin cites the same passage (*Inferno*, ix. 82, 83).]

[2] [*Inferno*, ix. 74.]

[3] [Psalms xxiii. 2 (Prayer-book version).]

[4] [Compare Vol. XVII. pp. 344, 401; Vol. XVIII. pp. 33, 116, 168, 212; and Vol. XIX. p. 274. And for Gérome, see Vol. XV. p. 497; Vol. XIX. p. 116; and Vol. XX. p. 195.]

[5] [Ephesians iii. 10, vi. 12.]

[6] [For Ruskin's notice of Frith's picture, see Vol. XIV. p. 161.]

[7] [For another reference to the Alabama award, see Vol. XXII. p. 140.]

[8] [Aristophanes, *Birds*, 819, etc. For another reference to Nephelo-coccygia, see Vol. XVIII. p. 23.]

half-dead dog on it, and the sea-ravens, κορῶναι εἰνάλιαι,[1] hovering over them—Raven's-bourne.[2]

184. With our Exhibition of to-day, gentlemen—its maudlin sentiment, carrion tragedy, insolent portraiture, absent religion, and puzzled, joyless, or meanly curious spectators—let me, in closing, compare an Exhibition of five hundred and more years ago. I want you to note it particularly, because those curious magpies of modern art literature, called by quaint coincidence Messrs. Crowe and Cavalcaselle, have discovered, I believe with perfect truth, that the Borgo Allegri of Florence was not named from the people's joy in Cimabue's picture, but had the name before.[3] Messrs. Crowe and Cavalcaselle would make you think the people had no joy. The fact was the street was indeed so named before, but the people's happiness was so great that tradition attached the name to it afterwards. To-day, however, I give you an entirely authentic and indisputable account of a similar festival in Siena, which I owe to the scrupulous and loving research of a very dear American friend, Charles Eliot Norton, from whom I have myself learnt more of Italian Art than from any other man living.

(1.) In 1308 Duccio di Boninsegna entered into agreement with the head of the works to paint a picture for the high altar. It was to be the best he could do, as the Lord should give him grace to do it—"quam melius poterit et sciverit et Dominus sibi largietur." While engaged upon it he was to undertake no other work; his salary was to be at the rate of sixteen soldi a day for every day employed upon it—"*pro quolibet, quo dictus Duccius laborabit suis manibus in dicta tabula;*" all needed materials were to be supplied to him free of cost, "so that the said Duccio shall be bound to put nothing into it but his own self and his labour"—"*ita quod dictus Duccius nihil in ea miscere teneatur, nisi suam personam et suam laborem.*" *

(2.) The main subject was the Virgin, on the back of whose throne lean four angels, while two on each side support its arms. Angels and saints are ranged to the right and left, and kneeling before the throne are the four bishops, the protectors of Siena. On the cushioned stool, on which the feet of the Virgin rest, the artist inscribed the following pious and proud petition: "*Mater Sancta . Dei . Sis . Caussa . Senis . Requiei . Sis . Ducio . Vita . Te Quia . Pinxit . Ita.*"

(3.) It was on the 9th of June, 1310, that this, "the most beautiful picture that ever was seen or made, and that cost more than 3000 golden florins," as the chronicler John del Grasso reports, was carried from the workshop of the artist to the cathedral. The day was a festival for the Sienese. Another chronicler, whose name is not known, but whose work is preserved in manuscript in the Communal Library of Siena, gives an account of the celebration. He says: "At this time the altar-piece for

* *Archiv. del Duomo*, Perg. 603, printed by Milanesi, Documenti I. 166.

[1] [See above, § 160, p. 155.]

[2] [The reference is to the Academy Exhibition of 1873, in which No. 986 was Mr. Briton Riviere's "All that was left of the homeward-bound." Among the marines was a shipwreck by W. L. Wyllie, No. 90.]

[3] [See on this subject Vol. XXIII. p. 330.]

the high altar was finished, and the picture that now hangs over the altar of St. Boniface was taken down, which was called the 'Madonna with the large eyes,' or 'Our Lady of Grace.' Now this Our Lady was she who had hearkened to the people of Siena when the Florentines were routed at Mont' Aperti,[1] and her place was changed because the new one was made, which is far more beautiful and devout and larger, and is painted on the back with the stories of the Old and New Testaments.

(4.) "And on the day that it was carried to the Duomo the shops were shut, and the Bishop conducted a great and devout company of priests and friars in solemn procession, accompanied by the nine signiors, and all the officers of the commune, and all the people; and one after another the worthiest, with lighted candles in their hands, took places near the picture, and behind came the women and children, with great devotion. And they accompanied the said picture up to the Duomo, making the procession around the Campo, as is the custom, all the bells ringing joyously, out of reverence for so noble a picture as this.

(5.) "And all that day they stood in prayer, with great almsgiving for poor persons, praying God and His Mother, who is our Advocate, to defend us by their infinite mercy from every adversity and all evil, and keep us from the hands of traitors and of the enemies of Siena."

We think ourselves wiser, gentlemen; we will have no more almsgiving, and no more prayer. May at least the God whom we pray to no longer, keep us from the hands of traitors, and of the enemies of England!

[1] [For particulars of the battle (September 4, 1260), see Vol. XXIII. p. 79.]

# NOTES FOR AN INTENDED CONTINUATION OF "LOVE'S MEINIE"

I. A PLEA FOR THE PIES

II. "WHY A SWALLOW HAS A SWALLOW TAIL"

III. STREPSILAS INTERPRES

IV. FLAT-BILLS AND KNIFE-BILLS

V. THE MYTH OF AUTOLYCUS AND PHILAMMON

# I

# A PLEA FOR THE PIES

[See § 55, p. 52]

LINNÆUS divides the tribe of Sitters into two — the Pies and the Sparrows; he calls the swimmers generally geese, the snatchers generally hawks, and the scratchers generally cocks. So you may easily recollect his six divisions—namely, Hawks (Accipitres), Pies (Picæ), Geese (Anseres), Stilters (Gaullæ), Cocks (Gallinæ), and Sparrows (Passeres). And you will find it useful to recollect these, because Linnæus was thinking, and you should think, not merely of the way that birds use their feet, but of the way they use their beaks—which is very notable. The Hawks essentially tear with their beak; they can, indeed, strike or bite with it also, but the essential use of it is as a hook to tear meat from bones with. The Pies essentially strike and bite and search, but cannot pull. The Geese, broad-billed, essentially sup, but cannot strike and bite. The Stilt birds, long-billed, essentially suck and sip, but cannot sup; and the Cocks and Sparrows both peck, pacifically, seeds, and, destructively, worms and insects. You have, therefore, if you regard the mechanical powers of the beak alone, a very sufficient distinction established between the Pies and Sparrows; so great indeed that we may at once raise the Pies, in this respect, to the same distinction in heraldry as the Falcon herself—namely, that "you shall say this hawke (or pie) hath a large beake, or a short beake, but (under penalty) call it not a bill."[1]

And if besides thinking of mechanical function we further take into our estimate its expressional function, of the voice, there will be a most notable distinction at once established between the birds (otherwise however resemblant) that have beaks with hoarse throats, or bills with smooth ones. So that, though Cuvier did away with Linnæus's order of the Pies,[2] it will certainly be convenient for us, in our art studies, to resume it; and the more because the two orders which we thus take upon us to restore—represented, one, typically by the Magpie, and the other by the Nightingale—have each a vast cycle of mythological story belonging to them, founded mainly on their clearly opponent characters; that the

[1] [Quoted from the section headed "Termes to commend sundrie properties in a Hawke" in *The Gentlemans Academie; or, The Booke of St. Albans*: see below, p. 314 *n.*, for particulars; and for another reference to the book, see *Fors Clavigera*, Letter 66, § 13. The words "(or pie)" and "(under penalty)" are added by Ruskin.]

[2] [See above, p. 53.]

Magpies, or Picæ, have pleasantly varied, mottled, or pied colour, but uniform and unpleasant voices; and the Sparrows, or Passeres, have sober and uniform colours, but pleasantly varied, pied, or modulated voices—the ποικιλία[1] being in the one tribe addressed to the eye, and in the other to the ear. Nay, that Latin word "Picæ" is curiously valuable, as collecting in a certain degree the expression of the two characters of the varied plumes and forceful beak in this species. It is properly, I believe, derived from "pingo," and might, in that respect, be conveniently written Pictæ, and the tribe, in English, called Picts. But the word "Picæ" in the look of it may serve to remind you of the power of the French word Pic, and of our peak, pick, and peck; and let it thus remind you that the true Pies, in using their beaks strongly, make themselves altogether into living Pick-axes, and swing their entire bodies to the blow, using their feet for a pivot.

[1] [On this word, see Vol. XX. p. 349 *n.*]

## II

# "WHY A SWALLOW HAS A SWALLOW-TAIL"

[See § 64, p. 58]

"DEAR MR. RUSKIN,—If all the five and ten minutes that I have spent watching the swallow and other birds, to try and get an answer from them to this question, were summed up, they would amount to a day or two of time.

"One result of such observation is, that I do not think a bird's tail, forked or otherwise, has much to do with its turn to right or left in the same plane of motion.

"A fish from head to tail is all propelling power and rudder, the fins only serving to steady it, and when fully expanded, to check or arrest forward motion.

"The swift, swallow, tern, and most of the forked-tailed birds, are short in body, and I believe they no more require to use the tail in turning quickly than a good sculler would require a rudder to turn a short boat.

"A good skater could not easily explain how he turns: it is more or less an act of volition, the head and weight of the body being thrown towards the direction he wishes to go.

"What I have been able to see so far, in watching the swallows and swifts, is that during a straight flight or dart the tail is kept more or less closed; that as the speed slackens or changes into wheeling and soaring they are constantly opening and closing the tail like a fan, also at times depressing it, especially at the moment of stopping. There is another movement of the tail upon its longitudinal axis, the plane of the expanded tail forming an angle of from thirty to nearly forty degrees with the plane of flight; in this movement the stiff outside feathers of the expanded tail would have an effect upon the direction of flight, particularly as to rise or fall to right or left. The young swallow, whose power of turn and character of flight is much the same as the old ones, has not the forked tail.

"I have watched the old swallows when building use the tail as a support, as men use a glazier's tool outside windows (White of Selborne well describes this); but here, if weight were no object, a square tail would do just as well. Curiously enough, there are two tropical swallows (Chatura macroptera, long-winged swift, and Hirundo Albicollis), with a square tail ending in points like our woodpeckers, but they are no doubt stay-at-home birds.

"The common sparrow may be often seen in towns minus his tail feathers; such birds do not appear, so far as I have observed them, to have any difficulty in steering. The tail of fast-flying birds seems to me to very much resemble the counter of a racing yacht, and, speaking as a boat-builder would, I should say that it gives length on the water-line, and a clean

delivery. A yacht would be more quickly turned about her own centre by the use of her wings or sails, if it were possible to use them as a bird does, than by the rudder, which really only moves the stern, and in turning a vessel upon her keel, or short round, one has to make great use of the head sail. Another resemblance between the fast-sailing vessel and the swallow is the careful way in which anything like surface friction is guarded against. Either a bird or fish is like a piece of wet soap in the way it slips through the fingers, the burnished plumage of the swallow far surpassing the polished copper of the racing yacht, or, what is still smoother, the black-leaded bottom of an old French smuggling lugger.

"Mr. Froude, when experimenting for the Admiralty upon the resistance of bodies moving in a fluid, found that in one wholly immersed like a fish, a certain rate of speed being once attained, the power required to maintain such speed equalled surface friction;[1] in other words, that if that were absent it equalled 0. So that a trout in its dart through the water required just so much less power to maintain its speed in proportion to the soap-like quality of its surface.

"When a wave of translation is created by a body moving upon the top of the water, this wave is added to surface friction, and indeed becomes the chief retarding power, increasing very rapidly with increase of speed.

"A good illustration of this is seen when a fish from distension of the air-bladder, or swim, is forced to remain upon the surface; its motion is then a slow and laboured wriggle, bearing about the same proportion to its speed under water that the speed of our fastest steamers does to that of a porpoise through the water, which will pass a steamer, I was going to say, as though she were at anchor, but certainly with little effort at nearly double the speed.

"A bird has in addition to surface friction its own weight to carry, and when soaring, the tail, which at such times is expanded, must be of great assistance.

"I have made a list of some birds with a forked tail (which I enclose), and in almost all of them the tail is rather short, supposing the outside feathers removed. Long-tailed birds like the magpie and pheasant have a form of tail the very reverse of the swallow, being wedge-shaped, and the two longest feathers in the middle; the flight of the magpie is slow, and of short duration, and such birds have a power of rising like a rocket through any small opening in a close wood, the long tail and short wings, placed well forward, seeming to enable them to do so. Perhaps the prevalence of this form of tail among tropical birds is to enable them to rise easily through those dense woods.

"But to return to the question: I think it comes to this, that the swallow and swift, birds intended for hard work, long and very rapid flight, and requiring a tail of some sort, as a counter or run, as a support in their building work, as an assistance in floating or soaring, and at times to arrest forward motion or alter the plane of flight; that the swallow-tail is the form that gives the largest amount of such useful tail with least possible *weight* of feather and friction. Which answer, even if it be the right one and

[1] [Mr. Froude gave a popular account of his experiments for the Admiralty in a lecture at South Kensington: "The Laws of Fluid Resistance, by W. Froude, Esq., LL.D., F.R.S." (see p. 110 for the point here noticed), in *Science Lectures at South Kensington*, 2 vols., 1870.]

worth anything, is given, I fear you will say, with a very large amount of word friction and wash of paper. Genesis i. 31 tells one, after all, as much.

"This list of some birds with a swallow-tail I made in hope of obtaining some information from accounts of some of them, as to the use of such tail; but beyond the statement that 'it is forked,' or 'deeply forked,' I have learnt nothing:—

3. Tern, kite, and forked-tailed brambling, a bird of passage. England.
4. Frigate or man-of-war bird, wings of great length.
5. Swallow-tailed goatsucker (Psalurus macropterus), tail much forked in male.
6. Collard Pratincole, Perdrix de Mer. Europe.
7. Swallow-tailed kingfisher (Galbula Paradisea) or Paradise Jacamar. Surinam.
8. Swallow-tailed hawk (Falco furcatus), copulates and feeds on wing like the swift, skims along the ground for grasshoppers, etc. Mississippi, U.S.A.
9. Cut-water (Rynchops nigra), lower part of beak longer than upper; it skims the water for small fish, shrimps, etc. U.S.A.
10. Tropic bird (Phaëton Œthereus), between the tropics far out at sea.
11. Bar-tailed humming-bird (Trochetus Sparganurus), extreme type of forked tail.
12. Japanese wagtail.

"In *Deucalion* you mention the wonderful climbing power of the young eels.[1] I believe that fish and the sole have for their weight a greater amount of muscular force or tone than any other fish; a sole will actually tear up the bottom or lining boards of a boat in its efforts to escape under them.

"I used to be under the impression that only what fishermen call round fish could swim fast, but I am sure now, having seen them do it, that most flat fish (the thornback perhaps excepted) can make the same rapid dart that a trout does; which is one reason that one has to drag a trawl-net so fast over the ground or such fish will escape by darting away on either side, especially in the daytime.

"I was much disappointed at the time that you were not able to come and idle away a few days sailing with me this summer, but it was just as well perhaps that you did not, for I never remember such a wild six months as those just past. I hope that next summer you will be better able to do so, and that the summer itself will be less calculated to shake one's faith, even in rainbows, than the last.

"You will be glad to hear that the little gull Jack, in whose history you were kind enough to take an interest, is alive and well.

"I am, dear Mr. Ruskin,

"Yours very sincerely,

"Robert C. Leslie.[2]

"6, Moira Place, Southampton,
"*December 1st*, 1882."

[1] [See *Deucalion*, ii. ch. i. § 27.]

[2] [Son of C. R. Leslie, R.A.; brother of Mr. G. D. Leslie, R.A. Another of his letters "meant for *Love's Meinie*" is printed in *The Storm-Cloud of the Nineteenth Century*, § 74. Other letters from him are given in *Dilecta*.]

## III

# STREPSILAS INTERPRES

ALTHOUGH this bird has no fringes to its feet, yet in its form, colour, and habits it so much resembles the phalarope that I think it may properly close our series of dabchicks. It is for the most part also a northern bird, certainly breeding as far North as Norway, or even Hudson's Bay, but it seems to be one of the most wandering birds in the world, for it is found in Florida and Mexico, on the coast of Peru, and south to the Straits of Magellan. It lives in perfect harmony with other birds, in the Regent's Park, in as beautiful a condition as if in a state of nature. Strepsilas is Greek for "turn" stone,[1] and Interpres Latin for interpreter. What Linnæus meant by calling the bird one, the reader must guess;[2] the name turnstone being given to it from its habit of turning up the stones on sea sand to find the slugs or insects underneath them. "The progress of a small group of turnstones," says Mr. Gould, "may be readily traced by the stones, shells, and clods of earth which they have turned over in their course, for which operation its peculiarly constructed bill is admirably adapted."[3] But he does not tell us what is the peculiarity of its construction. As far as I can judge from his drawing it seems to differ from the bills of other dabchicks, or sandpipers, in being somewhat stronger and slightly retroussé, forming a very sufficiently convenient pickaxe wedge. It seems to me strange that other birds with sharp noses and wits have not discovered also that there is good eating usually under stones, and taken to curious displacement of them, with proportional development of retroussé beaks; but so it is—the turnstone remains singular in all its nature, forming not only a species but even a genus by itself, say the classifiers, though what for I can neither see nor fancy, it being no wise apparently different from dozens of other birds of the same size, except in its bright colours, orange and black on the back, with white bodice, black chemisette, and orange, almost scarlet, stockings. With his usual pretty feeling for harmony in colour, Mr. Gould has given them iridescent shells to upset. He calls this costume chaste and beautiful. I should have called it myself somewhat gaudy, but its look of bright cleanliness may be meant, its actions and economy being, he farther says, as curious as the plumage is

[1] [This name was first given to the bird by Willughby (*Ornithologia*, 1676, p. 231.]

[2] ["Linnæus, who first met with this bird on the island of Gottland, July 1, 1741, was under the mistaken belief that it was there called Tolk (=*interpres*). But that name properly belongs to the Redshank, from the cry of warning to other animals that it gives on the approach of danger" (*Encyclopædia Britannica*, 9th ed., vol. xxiii. p. 668 *n.*).]

[3] [*Birds of Great Britain*, vol. iv., No. 60.]

pretty. Audubon, however, is the only naturalist who gives a complete account of its peculiar action. "Whenever the body was not too large, the bird bent its legs to half their length, placed its bill beneath it, and, with a sudden quick jerk of the head, pushed it off, when it quickly picked up the food that was thus exposed to view, and walked deliberately to the next shell to perform the same operation. In several instances, when the clusters of oyster-shells or clods of mud were too heavy to be removed in the ordinary way, they would not only use the bill and head, but also the breast, pushing the object with all their strength, and reminding me of the labour I have undergone in turning over a large turtle."[1] I find nothing, in any of the accounts of this bird, of its either swimming or diving, and it seems, as far as I can make out, to be a kind of shore plover, called in fact by the country people of South England the variegated plover. It shall be the last, therefore, of our series of dabchicks, and as I have Bewick's original drawing of it, I give his outline[2] to be

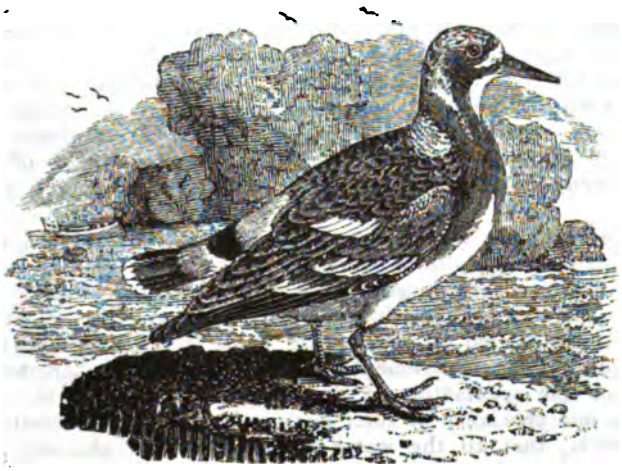


*Fig.* 14

compared with that of the water-ouzel, being the most slender of the whole group. Familiar as they ought to be to the eyes and hearts of all little human dabchicks, tameable every one of them, and lovable, far more delicate in their habits of diet than our present favourites—robin, tom-tit, or thrush—and accomplished in all manner of dealing with earth, water, and air that foot can tread or feather float on, I scarcely know in which direction of bird-life first to trace their manifold relations, but believe it will be found most convenient to keep for a time to the shore, and go on through the sandpipers to the stilt-walkers and herons.

[1] [*Ornithological Biography; or, An Account of the Habits of the Birds of the United States of America*, by John James Audubon, Edinburgh, 1838, vol. iv. p. 32).]

[2] [Ruskin apparently meant to give an outline from the drawing, like that of the water-ouzel (Fig. 13 *a*, p. 91). A reproduction of Bewick's woodcut (vol. i. p. 119) is here given instead.]

## IV

# FLAT-BILLS AND KNIFE-BILLS[1]

1. Looking back to the figure of affinities given for the group of the Dabchicks, § 121 [p. 112], the reader will see that the choice is now free to us to follow out the relationships of the pretty shore-birds in any one we choose of five directions. We may either ascend from the ouzels to blackbirds and larks, run with the rails till we find ourselves among the pheasants, trip with the Allegrets till they are transfixed into herons, or dip with the dipchicks till they take us to sea with the guillemots and the gulls.

I think it will be most easy, on the whole, to take the seaward direction first; and I am confirmed in doing so because I have hitherto been able to learn more of sea-birds from friends on the coasts than of land birds from the extremely limited circle of my acquaintance among squires and keepers.

But before we can follow the dipchicks beyond the surf, or venture for an instant to lose sight of land, we must pause to think a little over a quite odd and unplaceable group, the aquatic *grasing* birds.

At page 85, putting the ducks and divers together, as explained in section 93, I have ranged all water birds under the three kinds of dabchick, duck, and gull. This arrangement regards their entire character and way of living, not the specialities of their legs, or beaks, or feet, or wings. But there is one speciality of their beaks which we are compelled to take note of, namely, that all the water birds which live characteristically on soup, have spoon-beaks, but all those which live characteristically on fish, have knife-beaks.

2. Which live characteristically, I say, on soup; that is to say, on anything which can be sopped or slobbered up, or does not need catching; or on fish, especially living fish, who must be dived for, or caught on the rise, and after being caught, must be not only held fast, but thrown up with skill so as to be caught long-ways for swallowing, with other feats of bill-dexterity, requiring also in many cases great reach and flexibility of throat, and in extraordinary ones, elasticity of it, and in one case the fitting of a sack or wallet to the lower mandible of the bill itself.

3. Now the best first division of all water birds is into these two classes of flat-bills and knife-bills (one cannot say upright or vertical bills), the latter being in most books on natural history called "compressed,"[2] as if they had been squeezed between two walls, closing; evidently an absurd

[1] [Here printed from a proof.]
[2] [For the use of this word, see above, p. 87.]

epithet, for one might as well call the flat-bill squashed or crushed, as if it had been flattened under a weight. Knife-bill is but a make-shift word, but intelligible, signifying that the bill acts, though with two edges, vertically, like a knife on a plate, or an axe or chopper on a block, the name "bill" being originally given to the weapon from its resemblance to the bills of birds of prey, whether hawks or gulls. The proper word, however, is "beak" for the falcons, "bill" for the gulls, and the most perfect type of the knife-like form is already recognized in the name of the razor-bill, though lancet-bill would be better description in that instance.

4. But further. The flat-bills have usually, in order to sift the meat from their soup, a fringe of low bosses or serrations at their edges, not "teeth," for a tooth is properly an inserted thing, and meant to chew with; but these comb-like fringes are not meant to chew, or bruise, or cut, but only to catch, as a grating does in a stream, separating solid from fluid, so that the bird can slobber away the water or mud out of its billful, and keep all that is good for meat in it. On the other hand, the knife-bills are sometimes serrated at the edges much more sharply for real purposes of incision, or seizure, like the teeth of a steel trap; but this structure is a quite different one, and infrequent also, so that the idea of fringed and non-fringed bills may be held quite clear of it, and was made by Linnæus the ground of his terminology; for the classes which I call flat-bill and knife-bill, he calls toothed bill and non-toothed.[1] I wish my own readers to think of the two characters together, and to say the Flat bill, fringe-edged, and Knife bill, even-edged.

The birds with the flat bill, fringe-edged, will then include the Swans and Ducks (Cygnus and Anas), with the intermediate group of Geese (Anser). The birds with the knife bill, even-edged, will divide primarily into Short-winged and Long-winged (Brevipennes, Longipennes), the Short-winged dividing again into three main groups—Awks, Guillemots, Penguins—and the Long-winged also into three main groups of Petrels, Mews, and Phaetons. And thus my two great classes of flat-bill and knife-bill are briefly to be called Ducks and Gulls (Anatidæ and Laridæ); then the subdivisions will be as follows:—

(1) Anatidæ (Flat bill, fringe-edged).
Cygnus. Anser. Anas.
(2) Laridæ (Knife bill, even-edged).

| | |
|---|---|
| Brevipennes, Short-winged. | Longipennes, Long-winged. |
| Awk, Guillemot, Penguin. | Petrel, Mew, Phaeton.[2] |

[1] [His third genus "Anseres" being divided into (1) Rostro Denticulato (Anas and others), and (2) Rostro Edentulo. See *Caroli a Linné Systema Naturae cura J. F. Gmelin*, 1788, vol. i. p. 242.]

[2] [Here among the MSS. follow in proof various letters to Ruskin from Robert C. Leslie of 6 Moira Place, Southampton: 1882, Jan. 5, on the under-water flight of the Guillemot; 1883, Aug. 10, on his Gull(Jack)'s head turning black last April; 1883, Aug. 29, on want of colour in sea-birds: on Petrels, etc., Porpoises, tame Blackheaded Gull, the Strag, Bald Coot, Redshank, Curlew and Whimbrel, Avoset, pace of Gull's flight; and 1882, Dec. 1, "Why a Swallow has a Swallow-tail"; for the last named, see above, p. 177.]

# V

# THE MYTH OF AUTOLYCUS AND PHILAMMON

[See § 170, p. 163]

Ceyx is to be remembered as the son of Lucifer, and has a brother, Dædalion. Ceyx is peacefully minded, Dædalion delights in war. They are both turned into birds — Ceyx into the Halcyon, Dædalion into the Hawk. Both birds, therefore, in the minds of the ancients, are children of the Morning Star; but the one having the light given to its eyes, for rapine, and the other, to its plumes, for beauty.

Dædalion has one daughter, Chione, beloved both by Hermes and Apollo. To Hermes, she bears Autolycus; to Apollo, Philammon.

Now you will find the legends of both these persons become, in a little while, of very curious importance; recollect them at present by connecting them in your minds with what I told you of the Pies and Nightingales, that the one is notable for ποικιλία in colour, the other in voice.

Autolycus and Philammon are both powers of Variegation; one in shadow, the other in sound. Autolycus had the gift from his father, not only "ut furacissimus esset"—that he should be the most essential thief of thieves, but that he should be able to change the aspect of what he stole, even from black to white (Hyginus, Fable 204, and Ovid, *Metam.*, xi. 315), of which change we shall hear more when we come to the history of the crow and magpie. Philammon, on the other hand, is the reputed inventor of choral, or part, music, and gives that beautiful method of variegation to the Delphic hymns. Dryden betters Ovid by marking this specialty in his translation, which you may as well remember as a perfect expression of both the myths:—

> "To Mercury Autolycus she brought,
> Who turned to thefts and tricks his subtle thought;
> Possessed he was of all his father's slight,
> At will made white look black, and black look white.
> Philammon, born to Phœbus, like his sire,
> The muses loved, and finely struck the lyre,
> And made his voice and touch in harmony conspire."

Autolycus and Philammon, then, are grandchildren of the Hawk-king, Dædalion. But why does he become a hawk? Again and again, throughout mythology, you will find the force of the impression on men's minds of the danger of human pride taking the temper of insolence against the Gods. Chione, too proud of being loved by the sunshine and cloud, speaks scornfully of the beauty of Artemis, who kills her by transfixing her tongue with an arrow. Dædalion, furious with grief, casts himself from the cliff of Parnassus, and Apollo changes him into a hawk.

# INDEX OF BIRDS

## MENTIONED IN THE FOREGOING PAGES


Allegretta Nymphæa, 84 *seq.*
,, ,, Maculata, 86, 143
,, ,, Minuta, 88, 144
,, ,, Stellaris, 87, 143
Alpine Swift, 139
Arctic Fairy, 98, 146. *See* Phalarope

Baillon's Crake, 85, 87
Bat, 54, 57, 63
Blackbird, 79
Buntings, 80
Buzzard, 22

Changeful Fairy, 102, 147
Chough, 152; in Greek mythology and poetry, 152, 155 *seq.*, 161 *seq.*
Cincle, 142
Coot, 102, 111
Crakes, 85
Creepers, 80
Crossbills, 80
Crowfoot, 87
Crows, 79, 155

Dabchicks, 74–132
Dippers, 84
Divers, 84
Doorhawk. *See* Night-jar
Dove, 154
Ducks, 80
Duckers, 84
Dunlin, 91

Eagles, 20, 22, 31, 152, 154
Eider-ducks, 119–121

Falcons, 20–22
Fern-owl. *See* Night-jar
Finches, 80
Fissi-rostres, 47
Flamingo, 30
Fly-catcher, 57

Gannet, 150
Geese, 80
Goat-sucker, 52, 79
Gobemouche, 51
Golden Eagle, 22
Grebes, 90, 92; Little Grebe, 144
Guillemots, 93
Gulls, 80

Hawks, 20, 22, 79
Hen, 67, 75
Herons, 80
Hirundo Alpina, 139
,, Domestica, 135
,, Monastica, 135
,, Riparia, 136
,, Sagitta, 137
,, Terna, 155
Honey-buzzard, 22
Horn-bill, 152

Jays, 79

Kingfisher, 94
Kite, 65
Knife-bills, 182

Lark, 79
Lily-ouzel, 84–86

Magpie, 153
Marouette, 86
Martin, House, 58
,, Sand, 58
Martlet, 135
,, Bank, 136
Melanogaster (Black ouzel), 82
Merula Fontium, 81, 141

Night-jar, 140
Nightingale, 42, 79

Ouzel. *See* Lily-ouzel, Torrent-ouzel, Water-ouzel
Owl, 54, 79

Paradise, Bird of, 58, 78
Parrots, 42, 74
Peacock, 36, 39, 58
Phalarope, 98
„ Red-necked (=Tringa), 98
„ Coot-like (=Titania Inconstans), 102
Pheasants, 80
Phœnix. *See* Flamingo
Picæ (Pies), 52, 79, 152, 175
Plovers, 80, 91
Popinjay, 42
Porzana, Maruetta, 85
„ Minuta, 85
„ Pygmæa, 85
Poussin, 144
Puffin, 152

Rail, 116, 147
Rasores, 75
Robin, 28–44, 84; colours of, 33, 39; feathers, 30, 36–38; food, 32; in literature, 40 *seq.*; migrations, 29; motions, 33–35; pugnacity, 33; red-breast, 21, 134; blue-breast, 24
Rubecula Familiaris, 21
Ruddock. *See* Robin
Rutila Familiaris. *See* Robin

Sandpipers, 83, 91, 106
Sand-martin, 54
Scansores, 74
Seagull, 65, 155
Sparrows, 18, 80
Spoonbill, 152
Stint, 92
Stork, 80
Strepsilas Interpres, 181
Swallow, 45–73, 79, 176; beauty of, 45 *seq.*; Bible kind, 139; derivation of the word, 47; flight, 45, 46, 48–51, 58 *seq.*; head, 48; ministry to men, 71; nests, 51, 52; tail, 58; voracity, 46; five species of, 58, 135–140; house swallow, 135
Swans, 80
Swift, 137

Thrush, 79
Titania Arctica, 146
„ Inconstans, 147
Titmouse, 42
Tits, 80
Torrent-ouzel, 81, 141
Trepida Stagnarum (Little Grebe), 90
Tringa (Ruskin's "Arctic Fairy" or "Titania Arctica"), 98

Vulture, 154

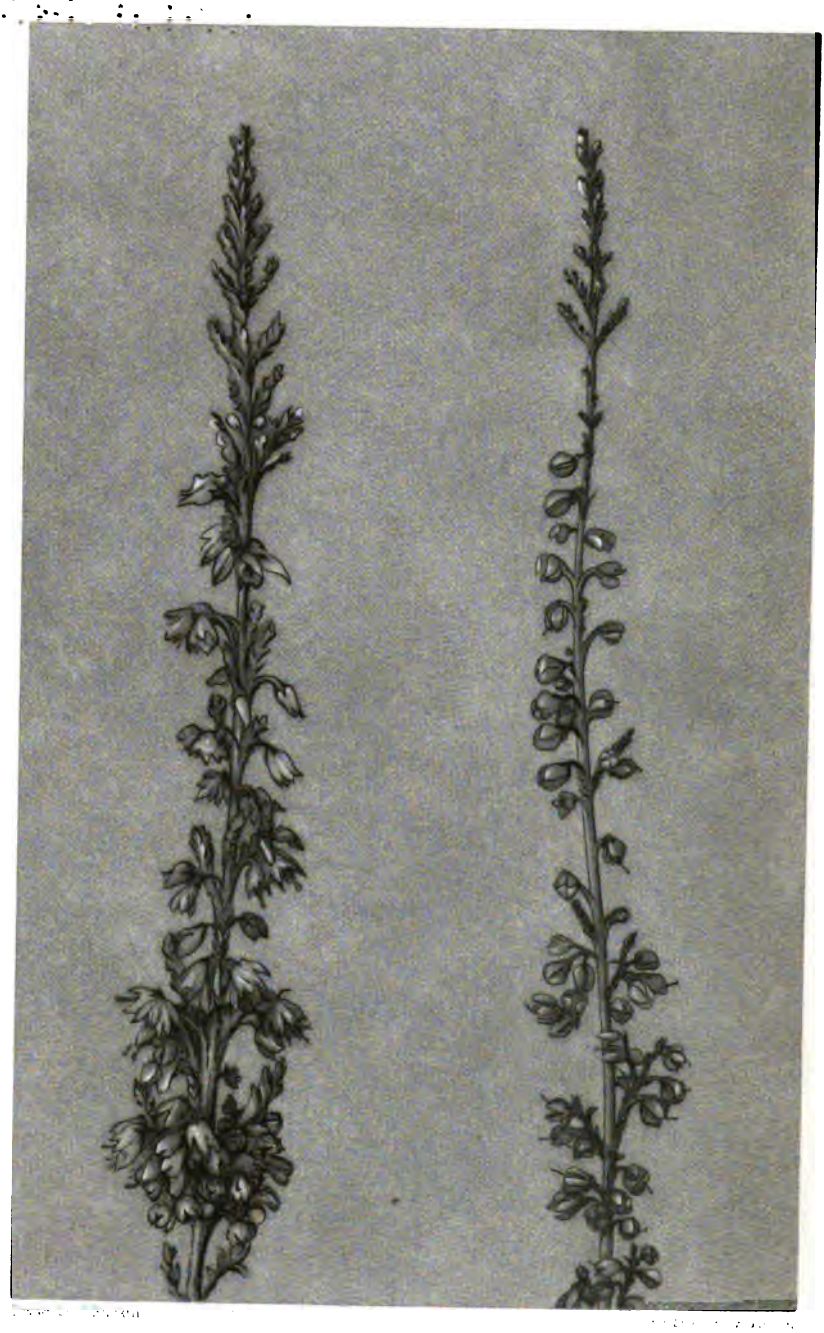
Wagtail, 34
Water-crake, 86
Water-hen, 105, 148
Water-ouzel, 82, 142
Water-rail, 105, 147
Woodpeckers, 79, 153
Wrens, 80

Yellow-hammer, 153

II

# PROSERPINA

(1875–1886)



Blossoming – and stricken in days

COMMON HEATH. [LING]

# PROSERPINA.

## STUDIES OF WAYSIDE FLOWERS,

WHILE THE AIR WAS YET PURE

*AMONG THE ALPS, AND IN THE SCOTLAND AND ENGLAND WHICH MY FATHER KNEW.*

BY

JOHN RUSKIN, LL.D.,

HONORARY STUDENT OF CHRIST CHURCH, AND SLADE PROFESSOR OF FINE ART.

"Oh—Prosérpina!
For the flowers now, which frighted, thou let'st fall
From Dis's waggon."

**VOLUME I.**

GEORGE ALLEN,
SUNNYSIDE, ORPINGTON, KENT.
1879.

[*Bibliographical Note.—Proserpina* was first issued in parts; and in the case of Parts VII.–X. (volume ii.) it has not hitherto been issued in any other way.

## IN PARTS

The title-page of each of the parts of volume i. was the same, except for alterations in the number of the part, in the date, and in the publisher's imprint. It was as shown on the preceding leaf. At the foot of the reverse of the title-page to volume i. supplied with Part VI. is the imprint "Hazell, Watson, and Viney, Printers, London and Aylesbury." The parts were issued, octavo, in paper wrappers (pale grey or light buff coloured), with the title-page (enclosed in a double-ruled frame) reproduced upon the front, with the addition of the rose above the publisher's imprint, and of the words "*Price Two Shillings and Sixpence*" below the frame. The headlines are on the left-hand pages throughout "Proserpina"; on the right-hand pages, the number and title of the chapter occupying them.

PART I. *First Edition* (1875).—This contained pp. 1–48, thus: Introduction (here pp. 197–206), pp. 1–12; Chapter I., pp. 13–28; Chapter II., pp. 29–44; part of Chapter III. (down to the second line of § 7), pp. 45–48. With this part was issued Plate I. (as frontispiece, not numbered), "Line-Study I., and Plate II." The title-page to this part has the following imprint on the reverse: "Watson and Hazell, Printers, London and Aylesbury." Issued in April 1875 (1000 copies).

A *second* edition of Part I. was issued in 1878 (1000 copies), a *third* in 1883 (1000); and a *fourth* in 1884 (500 copies). These later issues are distinguished (and so with later editions of other parts) by the words "Second (or Third) Thousand (or Edition)" upon both title-page and wrapper.

No alteration was made to the text in any editions of any of the parts.

PART II. *First Edition* (1875).—This contained pp. 49–96, thus: continuation of Chapter III., pp. 49–71; Chapter IV., pp. 72–96. No plates were issued with this part. Issued in August 1875 (1000 copies).

A *second* edition was issued in 1879 (1000), a *third* in 1886 (1500).

PART III. *First Edition* (1876).—This contained pp. 97–144, thus: Chapter V., pp. 97–117; Chapter VI., pp. 118–140; part of Chapter VIII. (down to the middle of § 4), pp. 141–144; and Plates III. and IV. Issued in March 1876 (1000 copies).

A *second* edition was issued in 1879 (1000), a *third* in 1889 (1350).

PART IV. *First Edition* (1876).—This contained pp. 145–194, thus: continuation of Chapter VIII., pp. 145–169; Chapter IX., pp. 170–188; Chapter X., pp. 189–194. With it were issued Plates V. and VI., and Line-Studies II., III., IV., and V. Issued in August 1876 (1000 copies).

A *second* edition was issued in 1880 (1000), and a *third* in 1889 (1350).

PART V. *First Edition* (1878).—This contained pp. 195–242, thus: Chapter XI., pp. 195–226; Chapter XII., pp. 227–242. With it were issued Plates VII. and VIII. Issued in January 1879 (1000 copies).

A *second* edition was issued in 1881 (1000), a *third* in 1896 (1100).

PART VI. *First Edition* (1879).—This contained the title-page (as given here, p. 189) and Contents (here p. 195) to volume i. and pp. 243–287, thus: Chapter XIII., pp. 243–251; Chapter XIV., pp. 252–263; Index I. ("Descriptive Nomenclature"), pp. 265–282; Index II. ("To the Plants . . . English Names"), pp. 283–285; Index III. ("To the Plants . . . Greek Names"), pp. 286, 287. The printer's imprint is repeated at the foot of the last page. No plates were issued with this part. Issued in April 1879 (1000 copies).

vol. 1

A *second* edition was issued in 1882 (1000), a *third* in 1897 (1050 copies; printed by Messrs. Ballantyne).

vol. 2

PART VII. *First Edition* (1882).—This begins volume ii. The title-page differs slightly from those of preceding parts, the author's description reading "Honorary Student of Christ Church and Honorary Fellow of Corpus | Christi College, Oxford." It contains Chapter I., pp. 1 (head, "Proserpina. Vol. II.") to 48. With it were issued Plates IX. and X. Issued in April 1882 (1000 copies).

PART VIII. *First Edition* (1882).—Title-page, as in Part VII. It contains pp. 49–112, thus: Chapter II., pp. 49–66; Chapter III., pp. 67–91; Chapter IV., pp. 92–112. With it was issued Plate XI. Issued in May 1882 (1000 copies).

PART IX. *First Edition* (1885).—On the title-page the author's description is "Honorary Student of Christ Church, Honorary Fellow of Corpus Christi | College, and Slade Professor of Fine Art, Oxford." Messrs. Hazell, Watson, and Viney's imprint appears on the reverse of the title-pages of Parts IX. and X. Part IX. contains pp. 113–162, thus: Chapter V., pp. 113–122; Chapter VI., pp. 123–137; Chapter VII., pp. 138–162. At the end of p. 162 is a list of errata, thus:—

> "P. 116, l. 13, for 'love' read 'beloved' [this was itself another misprint for 'be loved'].
>
> "P. 116, l. 15, put a semicolon, instead of comma, after 'it.'
>
> "P. 119, l. 9 from bottom, dele 'as' ['p. 119' should have been 'p. 118'].
>
> "P. 127, l. 5, put 'calf's muzzle' in inverted commas.
>
> "P. 129, 'never appearing in clusters'; I meant in close masses. It forms exquisite little rosy crowds, on ground that it likes."

In this edition the errata are corrected in their several places. With it were issued Plates XII. and XIII. Issued in May 1885 (1000 copies).

PART X. *First Edition* (1886).—On the title-page the author's description is "Honorary Student of Christ Church, | and Honorary Fellow of Corpus Christi College, Oxford." It contains pp. 163–204, thus: Chapter VIII., pp. 163–181; Chapter IX., pp. 182–204. With it were issued Plates XIV. and XV. Issued in July 1886 (1000 copies).

Separate copies of the plates, printed on larger paper, were at one time issued at the price of sixpence each, but this sale ceased in 1890.

The following list shows how the original plates and "Line-Studies" are numbered in the present volume:—

| | | | |
|---|---|---|---|
| Plate I. | Plate IX. | Plate VI. | Plate XXII. |
| Line-Study I. | ,, X. | ,, VII. | ,, XXIII. |
| Plate II. | ,, XI. | ,, VIII. | ,, XXIV. |
| Plate III. | ,, XII. | ,, IX. | ,, XXV. |
| ,, IV. | ,, XIII. | ,, X. | ,, XXVI. |
| ,, V. | ,, XVI. | ,, XI. | ,, XXVII. |
| Line-Study II. | ,, XVIII. | ,, XII. | ,, XXVIII. |
| ,, III. | ,, XIX. | ,, XIII. | ,, XXIX. |
| ,, IV. | ,, XX. | ,, XIV. | ,, XXX. |
| ,, V. | ,, XXI. | ,, XV. | ,, XXXI. |

## VOLUME I. IN COLLECTED FORM

*First Edition* (1879).—There is, strictly speaking, no first edition of volume i. in collected form, for Parts I.–VI. in their respective first editions, though often bound up in volume-form, were never so issued by the publisher.

*Second Edition* (1882).—The first collected volume, issued by Mr. Allen, was published in 1882, consisting of sheets of Parts of the second editions. The volume bears no statement upon its title-page to denote that it is other than the first edition of the work; the collation is the same, and there are no alterations in the text. But it is readily distinguishable, for (1) the date on the title-page is "1882" instead of "1879," and (2) the imprint (at the foot of the reverse) is "Chiswick Press:—C. Whittingham and Co., Took's Court, Chancery Lane."

Issued in 1882 in mottled-grey paper boards, with a white paper label on the back which reads "Ruskin. | Proserpina. | Vol. I." Price 15s.

*Third Edition.*—This, again, was made up of sheets of the Parts; of the third edition of Part I.; the second of Parts II., III., IV., V., and VI. In March 1893 the price of the volume was reduced to 10s.

Volume ii. (Parts VII.–X.) has never been issued in collected form.

---

There have been *unauthorised American editions*, in which all the ten parts are collected into a single volume.

---

*Variæ Lectiones.*—The following is a list of all the variations in the text, other than those already specified, but minor matters of spelling and page-reference, etc., are not included.

In the Intreduction: § 2, lines 2, 3, and 16, ed. 1 has "eight" for "nine" (Ruskin noted the correction in his copy, adding "but Miller's two varieties imply the ninth"); § 6, line 8, ed. 1 reads correctly "necessity of such kind"; misprinted, later, "necessity for such a kind."

In volume i.: Ch. 3, ii. § line 26, "is" is here corrected to "are" in accordance with Ruskin's copy.

Ch. vii. § 4, line 16, "free" is italicised by him. § 8, last lines, see

p. 295 *n.* The note on Scottish heraldry is now transferred to the end of ch. vii. from the end of ch. viii.

Ch. viii. The sections after § 12 have hitherto not been numbered; § 23, last line but one, "tribe" is here a correction for "order"; § 29, last word, see p. 318 *n.*

Ch. ix. § 7, line 8, "than" in ed. 1; misprinted, later, "that."

Ch. xi. § 22, footnote, the quotation from Dante and the reference to it ("41, 42" for "35") have been here corrected.

Ch. xii. § 1, line 6, for the alteration of "pervenche" to "pervenke" (so also in ii. ch. i. § 8), see p. 362 *n.*.

Accents have now been inserted in the table in i. ch. v. § 10, and corrections in the Greek, *ibid.*, § 12, as also in ch. viii. § 12. In ch. x. § 3 *n.*, "Farrer" has been corrected to "Farrar."

In volume ii.: Ch. i. § 31, for alterations here, see p. 406 *n.*; § 33, line 6, "Sibthorpe" is corrected to "Sibthorp" (so also in ch. iii. § 13 *n.*); § 35, line 2, "Gotthelf's, Freneli" is corrected to "Gotthelf's Freneli."

Ch. ii. § 11, line 3, "utricularias" is here a correction for "uvularias."

Ch. iii. § 13, footnote, "*Economics*" altered to "*Economist*"; § 14 (8), last line, the reference "§ 19" has hitherto been misprinted "see § 18."

Ch. iv. § 20, footnote, "Sir F." Palgrave is here corrected to "Sir W. G."

Ch. v. § 2, line 3, the reference to vol. i. of *Proserpina* (here altered to suit the present volume) was given as "p. 102" (a misprint for "p. 202") in the original edition.

Ch. vi. § 2, line 2, see p. 473 *n.* The lines now omitted were "S. 971 and 972 should be transposed in p. 79. S. 294 in p. 81 should be 984. D. 407 should be inserted after Peregrina in p. 83; and 203, in first line of p. 87, should be 903."

Ch. vi. § 6, a misprint of "muflande" for "mufflaude" is corrected, and the errata noted by the author at the end of ch. vii. (see above, p. 192) are also corrected.

Ch. vi. § 10, line 21, "double" before "epithet" is inserted in accordance with the author's revision.

Ch. vii. § 4, line 12, "above" is here corrected to "vol. i."; § 6, footnote, see p. 485 *n.*

Ch. viii. The numbering of the sections in this chapter, from § 4 onwards, have been altered; as the quotation from Viollet-le-Duc (formerly §§ 4–8) is now printed in small type; § 10, line 18, "mouths" is here corrected to "mouth"; § 12, line 2, "this" is here corrected to "the."

Ch. ix., end, see p. 525 *n.*

For the Indices, see pp. 553, 561 *nn.* In Index I., line 2, the words "(Compare Chapter v., § 2)" are now omitted; as the reference is wrong. The true reference is either "Ch. iii. § 2" or "Ch. iv. § 2" (p. 250), and both of these are given lower down in the text.

It may be noted that in the original edition of the parts of vol. ii. the numbering of the *figures* was erratic; thus, 1–5, then 24, 25, etc. With Fig. 24 a new system of numbers began, this being No. 24 counting from the beginning of vol. i.

The sections of the Introduction are now numbered for convenience of reference.]

# CONTENTS OF VOLUME I


| | | PAGE |
|---|---|---|
| INTRODUCTION | | 197 |
| CHAPTER I. | MOSS | 207 |
| „ II. | THE ROOT | 218 |
| „ III. | THE LEAF | 229 |
| „ IV. | THE FLOWER | 249 |
| „ V. | PAPAVER RHOEAS | 266 |
| „ VI. | THE PARABLE OF JOASH | 282 |
| „ VII. | THE PARABLE OF JOTHAM | 291 |
| „ VIII. | THE STEM | 300 |
| „ IX. | OUTSIDE AND IN | 320 |
| „ X. | THE BARK | 333 |
| „ XI. | GENEALOGY | 338 |
| „ XII. | CORA AND KRONOS | 362 |
| „ XIII. | THE SEED AND HUSK | 372 |
| „ XIV. | THE FRUIT GIFT | 378 |


# CONTENTS OF VOLUME II


| | | |
|---|---|---|
| CHAPTER I. | VIOLA | 387 |
| „ II. | PINGUICULA | 421 |
| „ III. | VERONICA | 434 |
| „ IV. | GIULIETTA | 451 |

PAGE

Chapter V. Brunella . . . . . 466

„ VI. Monacha . . . . . 473

„ VII. Science in her Cells . . . . . 483

„ VIII. The Fourfold State . . . . . 499

„ IX. Salvia Silvarum . . . . . 513

(Added in this Edition)

„ X. Of Caprice in Flowers . . . . . 526

„ XI. Of Wildness in Flowers . . . . . 532

## NOTES FOR "PROSERPINA"

1. Primula . . . . . 539

2. The Cyclamen . . . . . 540

3. Anagallis Tenella . . . . . 543

4. Myrtill.: Pretiosa . . . . . 545

5. Contorta Purpurea . . . . . 546

6. Colour in Vegetation . . . . . 547

7. Calices . . . . . 548

---

## INDEX I

Descriptive Nomenclature . . . . . 553

## INDEX II

English Names . . . . . 561

## INDEX III

Latin or Greek Names . . . . . 566

# PROSERPINA

## VOLUME I

## INTRODUCTION

BRANTWOOD, 14*th March*, 1874.

1. YESTERDAY evening I was looking over the first book in which I studied Botany,—Curtis's Magazine,[1] published in 1795 at No. 8, St. George's Crescent, Blackfriars Road, and sold by the principal booksellers in Great Britain and Ireland. Its plates are excellent, so that I am always glad to find in it the picture of a flower I know. And I came yesterday upon what I suppose to be a variety of a favourite flower of mine, called, in Curtis, "the St. Bruno's Lily."

I am obliged to say "what I suppose to be a variety," because my pet lily is branched,* while this is drawn as unbranched, and especially stated to be so. And the page of text, in which this statement is made, is so characteristic of botanical books, and botanical science, not to say all

* At least, it throws off its flowers on each side in a bewilderingly pretty way; a real lily can't branch, I believe: but, if not, what is the use of the botanical books saying "on an unbranched stem"?

[1] [*The Botanical Magazine; or, Flower-Garden Displayed*, by William Curtis, author of the *Flora Londinensis*, vol. ix., 1795.]

science as hitherto taught for the blessing of mankind, and of the difficulties thereby accompanying its communication, that I extract the page entire, printing it, opposite, as nearly as possible in facsimile.

2. Now you observe, in this instructive page, that you have in the first place, eight names given you for one flower; and that, among these eight names, you are not even at liberty to make your choice, because the united authority of Haller and Miller may be considered as an accurate balance to the single authority of Linnæus; and you ought therefore for the present to remain, yourself, balanced between the sides. You may be farther embarrassed by finding that the Anthericum of Savoy is only described as growing in Switzerland. And farther still, by finding that Mr. Miller describes two varieties of it, which differ only in size, while you are left to conjecture whether the one here figured[1] is the larger or smaller; and how great the difference is.

Farther, If you wish to know anything of the habits of the plant, as well as its eight names, you are informed that it grows both at the bottoms of the mountains, and the tops; and that, with us, it flowers in May and June,—but you are not told when, in its native country.

3. The four lines of the last clause but one, may indeed be useful to gardeners; but—although I know my good father and mother did the best they could for me in buying this beautiful book; and though the admirable plates of it did their work, and taught me much, I cannot wonder that neither my infantine nor boyish mind was irresistibly attracted by the text, of which this page is one of the most favourable specimens; nor, in consequence, that my botanical studies were—when I had attained the age of fifty—no farther advanced than the reader will find them in the opening chapter of this book.

[1] [That is, in the *Botanical Magazine*.]

# ANTHERICUM LILIASTRUM. SAVOY ANTHERICUM, or ST. BRUNO'S LILY.

*Claſs and Order.*

HEXANDRIA MONOGYNIA.

*Generic Character.*

*Cor.* 6-petala, patens. *Capſ.* ovata.

*Specific Character and Synonyms.*

ANTHERICUM *Liliaſtrum* foliis planis, ſcapo ſimpliciſſimo, corollis campanulatis, ſtaminiſibus declinatis. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 330. *Ait. Kew. v.* 1. *p.* 449.

HEMEROCALLIS floribus patulis ſecundis. *Hall. Hiſt. n.* 1230.

PHALANGIUM magno flore. *Bauh. Pin.* 29.

PHALANGIUM Allobrogicum majus. *Cluſ. cur. app. alt.*

PHALANGIUM Allobrogicum. The Savoye Spider-wort. *Park. Parad. p.* 150. *tab.* 151. *f.* 1.

---

Botaniſts are divided in their opinions reſpecting the genus of this plant; LINNÆUS conſiders it as an *Anthericum*, HALLER and MILLER make it an *Hemerocallis*.

It is a native of Switzerland, where, HALLER informs us, it grows abundantly in the Alpine meadows, and even on the ſummits of the mountains; with us it flowers in May and June.

It is a plant of great elegance, producing on an unbranched ſtem about a foot and a half high, numerous flowers of a delicate white colour, much ſmaller, but reſembling in form thoſe of the common white lily, poſſeſſing a conſiderable degree of fragrance, their beauty is heightened by the rich orange colour of their antheræ; unfortunately they are but of ſhort duration.

MILLER deſcribes two varieties of it differing merely in ſize.

A loamy ſoil, a ſituation moderately moiſt, with an eaſtern or weſtern expoſure, ſuits this plant beſt; ſo ſituated, it will increaſe by its roots, though not very faſt, and by parting of theſe in the autumn, it is uſually propagated.

PARKINSON deſcribes and figures it in his *Parad. Terreſt.*, obſerving, that "divers allured by the beauty of its flowers, had "brought it into theſe parts."

Which said book was therefore undertaken, to put, if it might be, some elements of the science of botany into a form more tenable by ordinary human and childish faculties; or—for I can scarcely say I have yet any tenure of it myself—to make the paths of approach to it more pleasant. In fact, I only know, of it, the pleasant distant effects, which it bears to simple eyes; and some pretty mists and mysteries, which I invite my young readers to pierce, as they may, for themselves,—my power of guiding them being only for a little way.

4. Pretty mysteries, I say, as opposed to the vulgar and ugly mysteries of the so-called science of botany,—exemplified sufficiently in this chosen page. Respecting which, please observe farther:—Nobody—I can say this very boldly—loves Latin more dearly than I; but, precisely because I do love it (as well as for other reasons), I have always insisted[1] that books, whether scientific or not, ought to be written either in Latin, or English; and not in a doggish mixture of the refuse of both.

Linnæus wrote a noble book of universal Natural History in Latin.[2] It is one of the permanent classical treasures of the world. And if any scientific man thinks his labours are worth the world's attention, let him, also, write what he has to say in Latin, finishedly and exquisitely, if it take him a month to a page.*

* I have by happy chance just added to my Oxford library[3] the poet Gray's copy of Linnæus, with its exquisitely written Latin notes, exemplary alike to scholar and naturalist.

---

[1] [See, for instance, *Queen of the Air*, § 57 (Vol. XIX. p. 355), and *Eagle's Nest*, § 186 (Vol. XXII. p. 248); and compare, above, pp. 14–15.]

[2] [Linnæus first published in 1735 at Leyden his *Systema Naturæ; sive Regna tria naturæ systematicè proposita per classes, ordines, genera species.* This work (consisting only of fourteen pages) was little more than an outline, which in succeeding editions (1740, etc.) was filled out: for particulars, see *A General View of the Writings of Linnæus*, by Richard Pulteney, M.D., F.R.S., 1781. For a reference to the spirit in which Linnæus undertook his labours, see Vol. IV. pp. 4–5.]

[3] [That is, his private library at Corpus. The book was afterwards at Brantwood, and was given by Ruskin to Professor Norton: see his note to Ruskin's letter of September 12, 1869 (in a later volume of this edition.]

But if—which, unless he be one chosen of millions, is assuredly the fact—his lucubrations are only of local and temporary consequence, let him write, as clearly as he can, in his native language.

5. This book, accordingly, I have written in English (not, by the way, that I *could* have written it in anything else—so there are small thanks to me); and one of its purposes is to interpret, for young English readers, the necessary European Latin or Greek names of flowers, and to make them vivid and vital to their understandings. But two great difficulties occur in doing this. The first, that there are generally from three or four, up to two dozen, Latin names current for every flower; and every new botanist thinks his eminence only to be properly asserted by adding another.

The second, and a much more serious one, is of the Devil's own contriving—(and remember I am always quite serious when I speak of the Devil [1]),—namely, that the most current and authoritative names are apt to be founded on some unclean or debasing association, so that to interpret them is to defile the reader's mind. I will give no instance; too many will at once occur to any learned reader, and the unlearned I need not vex with so much as one: but, in such cases, since I could only take refuge in the untranslated word by leaving other Greek or Latin words also untranslated, and the nomenclature still entirely senseless,—and I do not choose to do this,—there is only one other course open to me, namely, to substitute boldly, to my own pupils, other generic names for the plants thus faultfully hitherto titled.

6. As I do not do this for my own pride, but honestly for my readers' service, I neither question nor care how far the emendations I propose may be now or hereafter adopted. I shall not even name the cases in which they have been made, for the serious reason above specified; but

[1] [Compare Vol. XXII. p. 171.]

I then try the next word in my specimen page of Curtis; but there is no "Phalangium" at all in Loudon's index. And now I have neither time nor mind for more search, but will give, in due place, such account as I can of my own dwarf branched lily, which I shall call St. Bruno's, as well as this Liliastrum—no offence to the saint, I hope. For it grows very gloriously on the limestones of Savoy, presumably, therefore, at the Grande Chartreuse; though I did not notice it there, and made a very unmonkish use of it when I gathered it last:—There was a pretty young English lady at the table-d'hôte, in the Hôtel du Mont Blanc at St. Martin's,* and I wanted to get speech of her, and didn't know how. So all I could think of was to go half-way up the Aiguille de Varens, to gather St. Bruno's lilies; and I made a great cluster of them, and put wild roses all round them as I came down. I never saw anything so lovely; and I thought to present this to her before dinner,—but when I got down, she had gone away to Chamouni. My Fors always treated me like that, in affairs of the heart.

8. I had begun my studies of Alpine botany just eighteen years before, in 1842,[1] by making a careful drawing of wood-sorrel at Chamouni; and bitterly sorry I am, now, that the work was interrupted. For I drew, then, very delicately;[2] and should have made a pretty book if I could have got peace. Even yet, I can manage my point a little, and would far rather be making outlines of flowers than writing; and I meant to have drawn every English and Scottish wild flower, like this cluster of bog

* It was in the year 1860, in June.

[1] [These studies do not appear in any of Ruskin's manuscript books, as no diary of 1842 is extant (see Vol. III. p. xxv.).]

[2] [Compare what Ruskin says of an early drawing of grass, now at Oxford, Educational Series, No. 6 (Vol. XXI. p. 108).]

**Line-Study i**

Erica Tetralix

heather opposite,*—back, and profile, and front. But *Blackwood's Magazine*, with its insults to Turner, dragged me into controversy;[1] and I have not had, properly speaking, a day's peace since; so that in 1868 my botanical studies were advanced only as far as the reader will see in next chapter; and now, in 1874, must end altogether, I suppose, heavier thoughts and work coming fast on me. So that, finding among my note-books, two or three, full of broken materials for the proposed work on flowers; and, thinking they may be useful even as fragments, I am going to publish them in their present state,—only let the reader note that while my other books endeavour, and claim, so far as they reach, to give trustworthy knowledge of their subjects, this one only shows how such knowledge may be obtained; and it is little more than a history of efforts and plans,—but of both, I believe, made in right methods.

One part of the book, however, will, I think, be found of permanent value. Mr. Burgess has engraved on wood, in reduced size, with consummate skill, some of the excellent old drawings in the *Flora Danica*,[2] and has interpreted, and facsimiled, some of his own and my drawings from nature, with a vigour and precision unsurpassed in woodcut illustration,[3] which render these outlines the best exercises in black and white I have yet been able to prepare for my drawing pupils. The larger engravings by Mr. Allen may also be used with advantage as copies for drawings with pen or sepia.

* Admirably engraved by Mr. Burgess, from my pen drawing, now at Oxford.[4] By comparing it with the plate of the same flower in Sowerby's work,[5] the student will at once see the difference between attentive drawing, which gives the cadence and relation of masses in a group, and the mere copying of each flower in an unconsidered huddle.

[1] [See Vol. III., Introduction, p. xviii., and pp. 635 *seq.*, where the reply to *Blackwood*, written in 1836, is now printed.]
[2] [See below, p. 208 *n.*]
[3] [Compare the paper on Arthur Burgess in Vol. XIV. pp. 349 *seq.*]
[4] [Educational Series, No. 15 (Vol. XXI. pp. 76, 114).]
[5] [Vol. XV., No. 1014 (ed. 1).]

And, secondly,—If this immortality belongs to the Hypnum only?

It certainly does not, by any means: but, however modified or limited, this immortality is the first thing we ought to take note of in the mosses. They are, in some degree, what the "everlasting" is in flowers. Those minute green leaves of theirs do not decay, nor fall.

But how do they die, or how stop growing, then?—it is the first thing I want to know about them. And from all the books in the house, I can't as yet find out this. Meanwhile I will look at the leaves themselves.

4. Going out to the garden, I bring in a bit of old brick, emerald green on its rugged surface, and a thick piece of mossy turf.

First, for the old brick: To think of the quantity of pleasure one has had in one's life from that emerald green velvet,—and yet that for the first time to-day I am verily going to look at it! Doing so, through a pocket-lens of no great power, I find the velvet to be composed of small star-like groups of smooth, strong, oval leaves,—intensely green, and much like the young leaves of any other plant, except in this;—they all have a long brown spike, like a sting, at their ends.

5. Fastening on that, I take the *Flora Danica*,* and look through its plates of mosses, for their leaves only; and I find, first, that this spike, or strong central rib, is characteristic;—secondly, that the said leaves are apt to be not only spiked, but serrated, and otherwise angry-looking at the points;—thirdly, that they have a tendency to fold together in the centre (Fig. 1†); and at last, after

* Properly, *Floræ Danicæ*, but it is so tiresome to print the diphthongs that I shall always call it thus. It is a folio series, exquisitely begun a hundred years ago, and not yet finished.[1]

† Magnified about seven times. See note at end of this chapter [p. 216].

[1] [For the full title and other particulars of the work referred to, see Vol. XIII. p. 530. It was finished in 1883: see Vol. XV. p. 482 *n.*]

an hour's work at them, it strikes me suddenly that they are more like pineapple leaves than anything else.

And it occurs to me, very unpleasantly, at the same time, that I don't know what a pineapple is!

Stopping to ascertain that, I am told that a pineapple belongs to the "Bromeliaceæ"—(can't stop to find out what that means)—nay, that of these plants "the pineapple is the representative" (Loudon[1]); "their habit is acid, their leaves rigid, and toothed with spines, their bracteas often coloured with scarlet, and their flowers either white or blue"—(what are their flowers like?). But the two sentences that most interest me, are, that in the damp forests of Carolina, the Tillandsia, which is an "epiphyte" (*i.e.*, a plant growing on other plants), "forms dense festoons among the branches of the trees, vegetating among the black mould that collects upon the bark of trees in hot damp countries; other species are inhabitants of deep and gloomy forests, and others form, with their spring leaves, an impenetrable herbage in the Pampas of Brazil." So they really seem to be a kind of moss, on a vast scale.

*Fig.* 1

6. Next, I find in Gray,* Bromeliaceæ, and—the very thing I want—"Tillandsia, the black *moss*, or long moss, which, *like most Bromelias*, grows on the branches of trees." So the pineapple is really a moss; only it is a moss that flowers but "imperfectly." "The fine fruit is caused by the consolidation of the imperfect flowers."[2] (I wish we could consolidate some imperfect English moss-flowers into little pineapples then,—though they were only as big as filberts.) But we cannot follow that farther now; nor consider when a flower is perfect, and when it is not, or

* American,—*System of Botany*, the best technical book I have.

[1] [*Encyclopædia of Plants*, vol. ii. p. 1086.]

[2] [*Introduction to Structural and Systematic Botany*, by Asa Gray, M.D., New York, 1858, p. 492.]

we should get into morals, and I don't know where else; we will go back to the moss I have gathered, for I begin to see my way, a little, to understanding it.

7. The second piece I have on the table is a cluster—an inch or two deep—of the moss that grows everywhere, and that the birds use for nest-building, and we for packing, and the like. It is dry, since yesterday, and its fibres define themselves against the dark ground in warm green, touched with a glittering light. Note that burnished lustre of the minute leaves; they are necessarily always relieved against dark hollows, and this lustre makes them much clearer and brighter than if they were of dead green. In that lustre—and it is characteristic of them—they differ wholly from the dead, aloe-like texture of the pineapple leaf; and remind me, as I look at them closely, a little of some conditions of chaff, as on heads of wheat after being threshed. I will hunt down that clue presently; meantime there is something else to be noticed on the old brick.

8. Out of its emerald green cushions of minute leaves, there rise, here and there, thin red threads, each with a little brown cap, or something like a cap, at the top of it. These red threads shooting up out of the green tufts, are, I believe, the fructification of the moss; fringing its surface in the woods, and on the rocks, with the small forests of brown stems, each carrying its pointed cap or crest—of infinitely varied "mode," as we shall see presently; and, which is one of their most blessed functions, carrying high the dew in the morning; every spear balancing its own crystal globe.

9. And now, with my own broken memories of moss, and this unbroken, though unfinished, gift of the noble labour of other people, the *Flora Danica*, I can generalise the idea of the precious little plant, for myself, and for the reader.

All mosses, I believe (with such exceptions and collateral groups as we may afterwards discover, but they

are not many)—that is to say, some thousands of species—are, in their strength of existence, composed of fibres surrounded by clusters of dry *spinous* leaves, set close to the fibre they grow on. Out of this leafy stem descends a fibrous root, and ascends, in its season, a capped seed.

We must get this very clearly into our heads. Fig. 2, A, is a little tuft of a common wood moss of Norway,* in its fruit season, of its real size; but at present I want to look at the central fibre and its leaves accurately, and understand that first.

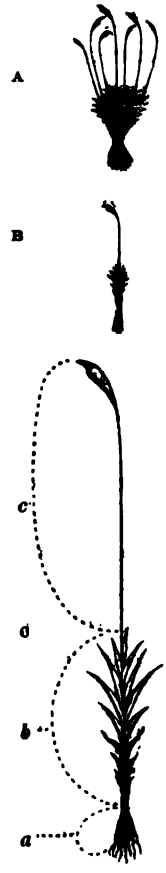


Fig. 2

10. Pulling it to pieces, we find it composed of seven little company-keeping fibres, each of which, by itself, appears as in Fig. 2, B: but as in this, its real size, it is too small, not indeed for our respect, but for our comprehension, we magnify it, Fig. 2, c, and thereupon perceive it to be indeed composed of, *a*, the small fibrous root which sustains the plant; *b*, the leaf-surrounded stem which is the actual being, and main creature, moss; and, *c*, the aspirant pillar, and cap, of its fructification.

11. But there is one minor division yet. You see I have drawn the central part of the moss plant (*b*, Fig. 2) half in outline and half in black; and that, similarly, in the upper group, which is too small to show the real roots, the base of the cluster is black. And you remember, I doubt not, how often, in gathering what most invited gathering, of deep green, starry, perfectly soft and living wood-moss, you found it fall asunder in your hand into multitudes of separate threads, each with its bright green crest, and long root of blackness.

* "Dicranum cerviculatum," sequel to *Flora Danica*, Tab. MDCCX.

That blackness at the root—though only so notable in this wood-moss and collateral species, is indeed a general character of the mosses, with rare exceptions. It is their funeral blackness;—that, I perceive, is the way the moss leaves die. They do not fall—they do not visibly decay. But they decay *in*visibly, in continual secession, beneath the ascending crest. They rise to form that crest, all green and bright, and take the light and air from those out of which they grew;—and those, their ancestors, darken and die slowly, and at last become a mass of mouldering ground. In fact, as I perceive farther, their final duty is so to die. The main work of other leaves is in their life,—but these have to form the earth out of which all other leaves are to grow. Not to cover the rocks with golden velvet only, but to fill their crannies with the dark earth, through which nobler creatures shall one day seek their being.

12. "Grant but as many sorts of mind as moss."[1] Pope could not have known the hundredth part of the number of "sorts" of moss there are; and I suppose he only chose the word because it was a monosyllable beginning with m, and the best English general expression for despised and minute structures of plants. But a fate rules the words of wise men, which makes their words truer, and worth more, than the men themselves know.[2] No other plants have so endless variety on so similar a structure as the mosses; and none teach so well the Humility of Death. As for the death of our bodies, we have learned, wisely, or unwisely, to look the fact of that in the face. But none of us, I think, yet care to look the fact of the death of our minds in the face. I do not mean death of our souls, but of our mental work. So far as it is good *art*, indeed, and done in realistic form, it may perhaps not die; but so far as it was only good *thought*—good, for its time, and apparently a great achievement therein—that good, useful thought may

[1] [*Moral Essays*, Epistle I., i. 18.]
[2] [Compare Vol. V. pp. 115–116 *n.*, and Vol. XIX. pp. 308, 309.]

yet in the future become a foolish thought, and then die quite away,—it, and the memory of it,—when better thought and knowledge come. But the better thought could not have come if the weaker thought had not come first, and died in sustaining the better. If we think honestly, our thoughts will not only live usefully, but even perish usefully—like the moss—and become dark, not without due service. But if we think dishonestly, or malignantly, our thoughts will die like evil fungi,—dripping corrupt dew.

18. But farther. If you have walked moorlands enough to know the look of them, you know well those flat spaces or causeways of bright green or golden ground between the heathy rock masses; which signify winding pools and inlets of stagnant water caught among the rocks;—pools which the deep moss that covers them—*blanched*, not black, at the root,—is slowly filling and making firm; whence generally the unsafe ground in the moorland gets known by being *mossy* instead of heathy; and is at last called by its riders, briefly, "the Moss": and as it is mainly at these same mossy places that the riding is difficult, and brings out the gifts of horse and rider, and discomfits all followers not similarly gifted, the skilled crosser of them got his name, naturally, of "moss-rider," or moss-trooper. In which manner the moss of Norway and Scotland has been a task-master and Maker of Soldiers, as yet, the strongest known among natural powers. The lightning may kill a man, or cast down a tower, but these little tender leaves of moss —they and their progenitors—have trained the Northern Armies.

14. So much for the human meaning of that decay of the leaves. Now to go back to the little creatures themselves. It seems that the upper part of the moss fibre is especially *un*decaying among leaves; and the lower part, especially decaying. That, in fact, a plant of moss-fibre is a kind of persistent state of what is, in other plants, annual. Watch the year's growth of any luxuriant flower. First it comes out of the ground all fresh and bright; then, as

the higher leaves and branches shoot up, those first leaves near the ground get brown, sickly, earthy,—remain for ever degraded in the dust, and under the dashed slime in rain, staining, and grieving, and loading them with obloquy of envious earth, half-killing them,—only life enough left in them to hold on the stem, and to be guardians of the rest of the plant from all they suffer;—while, above them, the happier leaves, for whom they are thus oppressed, bend freely to the sunshine, and drink the rain pure.

The moss strengthens on a diminished scale, intensifies, and makes perpetual, these two states,—bright leaves above that never wither, leaves beneath, that exist only to wither.

15. I have hitherto spoken only of the fading moss as it is needed for change into earth. But I am not sure whether a yet more important office, in its days of age, be not its use as a colour.

We are all thankful enough—as far as we ever are so—for green moss, and yellow moss. But we are never enough grateful for black moss. The golden would be nothing without it, nor even the grey.

It is true that there are black lichens enough, and brown ones: nevertheless, the chief use of lichens is for silver and gold colour on rocks; and it is the dead moss which gives the leopard-like touches of black. And yet here again—as to a thing I have been looking at and painting all my life—I am brought to pause, the moment I think of it carefully. The black moss which gives the precious Velasquez touches,[1] lies, much of it, flat on the rocks; radiating from its centres—powdering in the fingers, if one breaks it off, like dry tea. Is it a black species? or a black-parched state of other species, perishing for the sake of Velasquez effects, instead of accumulation of earth? and, if so, does it die of drought, accidentally, or, in a sere old age, naturally? and how is it related to the rich green bosses that grow in deep velvet? And there again is another matter

[1] [Compare *Elements of Drawing*, § 178 (Vol. XV. p. 154).]

not clear to me. One calls them "velvet" because they are all brought to an even surface at the top. Our own velvet is reduced to such trimness by cutting. But how is the moss trimmed? By what scissors? Carefullest Elizabethan gardener never shaped his yew hedge more daintily than the moss fairies smooth these soft rounded surfaces of green and gold. And just fancy the difference, if they were ragged! If the fibres had every one of them leave to grow at their own sweet will, and to be long or short as they liked, or, worse still, urged by fairy prizes into laboriously and agonizingly trying which could grow longest. Fancy the surface of a spot of competitive moss!

16. But how is it that they are subdued into that spherical obedience, like a crystal of wavellite?* Strange—that the vegetable creatures growing so fondly on rocks should form themselves in that mineral-like manner. It is true that the tops of all well-grown trees are rounded, on a large scale, as equally; but that is because they grow from a central stem, while these mossy mounds are made out of independent filaments, each growing to exactly his proper height in the sphere—short ones outside, long in the middle. Stop, though; *is* that so? I am not even sure of that; perhaps they are built over a little dome of decayed moss below.† I must find out how every filament grows,

* The reader should buy a small specimen of this mineral; it is a useful type of many structures.[1]

† Lucca, *Aug. 9th*, 1874.—I have left this passage as originally written, but I believe the dome is of accumulated earth. Bringing home, here, evening after evening, heaps of all kinds of mosses from the hills among which the Archbishop Ruggieri was hunting the wolf and her whelps in Ugolino's dream,[2] I am more and more struck, every day, with their special function as earth-gatherers, and with the enormous importance to their own brightness, and to our service, of that dark and degraded state of the inferior leaves. And it fastens itself in my mind mainly as their distinctive character, that as the leaves of a tree become wood, so the leaves of a moss become earth, while yet a normal part of the plant. Here is a cake in my hand weighing half a pound, bright green on the surface, with minute crisp leaves; but an inch thick beneath in what looks

[1] [For other references to the mineral, see Vol. XXVI. p. 47.]
[2] [*Inferno*, xxxiii. 26 *seq.*; compare Vol. XXIII. p. 284.]

separately—from root to cap, through the spirally set leaves. And meanwhile I don't know very clearly so much as what a root is—or what a leaf is. Before puzzling myself any farther in examination either of moss or any other grander vegetable, I had better define these primal forms of all vegetation, as well as I can—or rather begin the definition of them, for future completion and correction. For, as my reader must already sufficiently perceive, this book is literally to be one of studies—not of statements. Some one said of me once, very shrewdly, When he wants to work out a subject, he writes a book on it. That is a very true saying in the main,—I work down or up to my mark, and let the reader see process and progress, not caring to conceal them. But this book will be nothing but process. I don't mean to assert anything positively in it from the first page to the last. Whatever I say, is to be understood only as a conditional statement—liable to, and inviting, correction. And this the more because, as, on the whole, I am at war with the botanists, I can't ask them to help me, and then call them names afterwards. I hope only for a contemptuous heaping of coals on my head by correction of my errors from them;—in some cases, my scientific friends will, I know, give me forgiving aid;—but, for many reasons, I am forced first to print the imperfect statement, as I can independently shape it; for if once I asked for, or received help, every thought would be frost-bitten into timid expression, and every sentence broken by apology. I should have to

at first like clay, but is indeed knitted fibre of exhausted moss. Also, I don't at all find the generalization I made from the botanical books likely to have occurred to me from the real things. No moss leaves that I can find here give me the idea of resemblance to pineapple leaves; nor do I see any, through my weak lens, clearly serrated; but I do find a general tendency to run into a silky filamentous structure, and in some, especially on a small one gathered from the fissures in the marble of the cathedral, white threads of considerable length at the extremities of the leaves, of which threads I remember no drawing or notice in the botanical books. Figure 1 represents, magnified, a cluster of these leaves, with the germinating stalk springing from their centre; but my scrawl was tired and careless, and for once Mr. Burgess has copied *too* accurately.

write a dozen of letters before I could print a line, and the line, at last, would be only like a bit of any other botanical book—trustworthy it might be, perhaps; but certainly unreadable. Whereas now, it will rather put things more forcibly in the reader's mind to have them retouched and corrected as we go on; and our natural and honest mistakes will often be suggestive of things we could not have discovered but by wandering.

On these guarded conditions, then, I proceed to study, with my reader, the first general laws of vegetable form.

# CHAPTER II

## THE ROOT

1. PLANTS in their perfect form consist of four principal parts,—the Root, Stem, Leaf, and Flower.[1] It is true that the stem and flower are parts, and remnants, or altered states, of the leaves; and that, speaking with close accuracy, we might say, a perfect plant consists of leaf and root. But the division into these four parts is best for practical purposes, and it will be desirable to note a few general facts about each, before endeavouring to describe any one kind of plant. Only, because the character of the stem depends on the nature of the leaf and flower, we must put it last in order of examination; and trace the development of the plant first in root and leaf; then in the flower and its fruit; and lastly in the stem.

2. First, then, the Root.

Every plant is divided, as I just said, in the main, into two parts, and these have opposite natures. One part seeks the light; the other hates it. One part feeds on the air; the other on the dust.

The part that loves the light is called the Leaf. It is an old Saxon word; I cannot get at its origin.[2] The part that hates the light is called the Root.

In Greek, ῥίζα, Rhiza.*

* Learn this word, at any rate; and if you know any Greek, learn also this group of words: "ὡς ῥίζα ἐν γῇ διψώσῃ,"[3] which you may chance to meet with, and even to think about, some day.

[1] [For the omission of fruit from this list, see Index I. p. 553.]

[2] ["By some scholars regarded as cognate with Lithuanian *lùpti*, Old Slavonic *lupiti*, to peel, strip off" (*The New English Dictionary*).]

[3] [Isaiah liii. 2: "(He shall grow up . . .) as a root in a thirsty ground."]

In Latin, Radix, "the growing thing," which shortens, in French, into Race, and then they put on the diminutive "ine," and get their two words, Race, and Racine, of which we keep Race for animals, and use for vegetables a word of our own Saxon (and Dutch) dialect,—"root" (connected with Rood—an image of wood; whence at last the Holy Rood, or Tree).

8. The Root has three great functions:—

1st. To hold the plant in its place.
2nd. To nourish it with earth.
3rd. To receive vital power for it from the earth.

With this last office is in some degree,—and especially in certain plants,—connected, that of reproduction.

But in all plants the root has these three essential functions.

First, I said, to hold the Plant in its place. The Root is its Fetter.

You think it, perhaps, a matter of course that a plant is not to be a crawling thing? It is not a matter of course at all. A vegetable might be just what it is now, as compared with an animal;—might live on earth and water instead of on meat,[1]—might be as senseless in life, as calm in death, and in all its parts and apparent structure unchanged; and yet be a crawling thing. It is quite as easy to conceive plants moving about like lizards, putting forward first one root and then another, as it is to think of them fastened to their place. It might have been well for them, one would have thought, to have the power of going down to the streams to drink, in time of drought; —of migrating in winter with grim march from north to south of Dunsinane Hill side.[2] But that is not their appointed Fate. They are—at least, all the noblest of them —rooted to their spot. Their honour and use are in giving

[1] [Ruskin in his copy writes that this passage "needs a note about nasty carnivorous vegetables"—a topic to which he again alludes at pp. 391, 414.]
[2] [*Macbeth*, Act iv. sc. 1.]

immovable shelter,—in remaining landmarks, or lovemarks, when all else is changed:—

> "The cedars wave on Lebanon,
> But Judah's statelier maids are gone." [1]

4. Its root is thus a form of fate to the tree. It condemns, or indulges it, in its place. These semi-living creatures, come what may, shall abide, happy, or tormented. No doubt concerning "the position in which Providence has placed *them*," is to trouble their minds, except so far as they can mend it by seeking light, or shrinking from wind, or grasping at support, within certain limits.[2] In the thoughts of men they have thus become twofold images,—on the one side, of spirits restrained and half destroyed, whence the fables of transformation into trees; on the other, of spirits patient and continuing, having root in themselves and in good ground,[3] capable of all persistent effort and vital stability, both in themselves, and for the human States they form.

5. In this function of holding fast, roots have a power of grasp quite different from that of branches. It is not a grasp, or clutch by contraction, as that of a bird's claw, or of the small branches we call "tendrils" in climbing plants. It is a dead, clumsy, but inevitable grasp, by swelling, *after* contortion. For there is this main difference between a branch and root, that a branch cannot grow vividly but in certain directions and relations to its neighbour branches; but a root can grow wherever there is earth, and can turn in any direction to avoid an obstacle.*

* "Duhamel,[4] botanist of the last century, tells us that, wishing to preserve a field of good land from the roots of an avenue of elms which were exhausting it, he cut a ditch between the field and avenue to intercept

[1] [Byron's *Hebrew Melodies* ("The Wild Gazelle"). Ruskin adds in his copy, "Learn the whole poem, those of you who have ever even heard of such a person as BYRON." He probably added this note when writing his protest against the neglect of Byron: see *Fiction, Fair and Foul*, §§ 92 *seq.*]

[2] [Compare *Modern Painters*, vol. ii. (Vol. IV. p. 169), where Ruskin refers to this chapter.]

[3] [See Mark iv. 17, and Matthew xiii. 8.]

[4] [Duhamel du Monceau, author of *La Physique des Arbres*, etc.]

6. In thus contriving access for itself where it chooses, a root contorts itself into more serpent-like writhing than branches can; and when it has once coiled partly round a rock, or stone, it grasps it tight, necessarily, merely by swelling. Now a root has force enough sometimes to split rocks, but not to crush them; so it is compelled to grasp by *flattening* as it thickens; and, as it must have room somewhere, it alters its own shape as if it were made of dough, and holds the rock, not in a claw, but in a wooden cast or mould, adhering to its surface. And thus it not only finds its anchorage in the rock, but binds the rocks of its anchorage with a constrictor cable.[1]

7. Hence—and this is a most important secondary function—roots bind together the ragged edges of rocks as a hem does the torn edge of a dress: they literally stitch the stones together; so that, while it is always dangerous to pass under a treeless edge of overhanging crag, as soon as it has become beautiful with trees, it is safe also. The rending power of roots on rocks has been greatly overrated. Capillary attraction in a willow wand will indeed split granite, and swelling roots sometimes heave considerable masses aside, but on the whole, roots, small and great, bind, and do not rend.* The surfaces of mountains are dissolved and disordered, by rain, and frost, and chemical decomposition, into mere heaps of loose stones on their desolate summits; but, where the forests grow, soil accumulates and disintegration ceases. And by cutting down forests on

the roots. But he saw with surprise those of the roots which had not been cut, go down behind the slope of the ditch to keep out of the light, go under the ditch, and into the field again." And the Swiss naturalist Bonnet[2] said wittily, apropos of a wonder of this sort, "that sometimes it was difficult to distinguish a cat from a rose-bush."

* As the first great office of the mosses is the gathering of earth, so that of the grasses is the binding of it. Theirs the Enchanter's toil, not in vain,—making ropes out of sea-sand.[3]

[1] [Compare what is said of the conifer in *Fors Clavigera*, Letter 85 (Notes and Correspondence, vii.).]

[2] [Charles Bonnet, author of *Œuvres d'Histoire Naturelle et de Philosophie*, Neufchâtel, 8 vols. 1779–1783.]

[3] [See Vol. XIV. p. 97 n.; and compare, below, p. 371.]

great mountain slopes, not only is the climate destroyed, but the danger of superficial landslip fearfully increased.

8. The second function of roots is to gather for the plant the nourishment it needs from the ground. This is partly water, mixed with some kinds of air (ammonia, etc.), but the plant can get both water and ammonia from the atmosphere; and, I believe, for the most part does so; though, when it cannot get water from the air, it will gladly drink by its roots. But the things it cannot receive from the air at all are certain earthy salts, essential to it (as iron is essential in our own blood), and of which, when it has quite exhausted the earth, no more such plants can grow in that ground. On this subject you will find enough in any modern treatise on agriculture; all that I want you to note here is that this feeding function of the root is of a very delicate and discriminating kind, needing much searching and mining among the dust, to find what it wants. If it only wanted water, it could get most of that by spreading in mere soft senseless limbs, like sponge, as far, and as far down, as it could; but to get the *salt* out of the earth it has to *sift* all the earth, and taste and touch every grain of it that it can, with fine fibres. And therefore a root is not at all a merely passive sponge or absorbing thing, but an infinitely subtle tongue, or tasting and eating thing. That is why it is always so fibrous and divided and entangled in the clinging earth.

9. "Always fibrous and divided"? But many roots are quite hard and solid!

No; the active part of the root is always, I believe, a fibre. But there is often a provident and passive part—a savings bank of root—in which nourishment is laid up for the plant, and which, though it may be underground, is no more to be considered its real root than the kernel of a seed is. When you sow a pea, if you take it up in a day or two, you will find the fibre below, which is root; the shoot above, which is plant; and the pea as a now partly exhausted storehouse, looking very woeful, and like the

granaries of Paris after the fire.[1] So, the round solid root of a cyclamen, or the conical one which you know so well as a carrot, are not properly roots, but permanent storehouses,—only the fibres that grow from them are roots. Then there are other apparent roots which are not even storehouses, but refuges; houses where the little plant lives in its infancy, through winter and rough weather. So that it will be best for you at once to limit your idea of a root to this,—that it is a group of growing fibres which taste and suck what is good for the plant out of the ground, and by their united strength hold it in its place; only remember the thick limbs of roots do not feed, but only the fine fibres at the ends of them which are something between tongues and sponges, and while they absorb moisture readily, are yet as particular about getting what they think nice to eat as any dainty little boy or girl; looking for it everywhere, and turning angry and sulky if they don't get it.

10. But the root has, it seems to me, one more function, the most important of all. I say, it seems to me, for observe, what I have hitherto told you is all (I believe) ascertained and admitted; this that I am going to tell you has not yet, as far as I know, been asserted by men of science, though I believe it to be demonstrable. But you are to examine into it, and think of it for yourself.

There are some plants which appear to derive all their food from the air—which need nothing but a slight grasp of the ground to fix them in their place. Yet if we were to tie them into that place, in a framework, and cut them from their roots, they would die. Not only in these, but in all other plants, the vital power by which they shape and feed themselves, whatever that power may be, depends, I think, on that slight touch of the earth, and strange inheritance of its power.[2] It is as essential to the plant's life

[1] [At the time of the Commune: see *Fors Clavigera*, Letter 17, §§ 7, 10.]

[2] [Compare *Deucalion*, ii. ch. iii. § 27, where Ruskin refers to the suggestion here made "that the root is not merely a channel of material nourishment to the plant, but has a vital influence by mere contact with the earth."]

as the connection of the head of an animal with its body by the spine is to the animal. Divide the feeble nervous thread, and all life ceases. Nay, in the tree the root is even of greater importance. You will not kill the tree, as you would an animal, by dividing its body or trunk. The part not severed from the root will shoot again. But in the root, and its touch of the ground, is the life of it. My own definition of a plant would be "a living creature whose source of vital energy is in the earth" (or in the water, as a form of the earth; that is, in inorganic substance). There is, however, one tribe of plants which seems nearly excepted from this law. It is a very strange one, having long been noted for the resemblance of its flowers to different insects; and it has recently been proved by Mr. Darwin to be dependent on insects for its existence.[1] Doubly strange therefore, it seems, that in some cases this race of plants all but reaches the independent life of insects. It rather *settles* upon boughs than roots itself in them; half of its roots may wave in the air.

11. What vital power is, men of science are not a step nearer knowing than they were four thousand years ago. They are, if anything, farther from knowing now than then, in that they imagine themselves nearer. But they know more about its limitations and manifestations than they did. They have even arrived at something like a proof that there is a fixed quantity of it flowing out of things and into them. But, for the present, rest content with the general and sure knowledge that, fixed or flowing, measurable or immeasurable—one with electricity or heat or light, or quite distinct from any of them—life is a delightful, and its negative death, a dreadful thing, to human creatures; and that you can give or gather a certain quantity of life into plants, animals, and yourself, by wisdom and courage, and by their reverses can bring upon them any quantity of death you

[1] [*On the Various Contrivances by which British and Foreign Orchids are Fertilised by Insects*, by Charles Darwin, 1862.]

please, which is a much more serious point for you to consider than what life and death are.

12. Now, having got a quite clear idea of a root properly so called, we may observe what those storehouses, refuges, and ruins are, which we find connected with roots. The greater number of plants feed and grow at the same time; but there are some of them which like to feed first and grow afterwards. For the first year, or, at all events, the first period of their life, they gather material for their future life out of the ground and out of the air, and lay it up in a storehouse, as bees make combs. Of these stores[1]—for the most part rounded masses tapering downwards into the ground—some are as good for human beings as honeycombs are; only not so sweet. We steal them from the plants, as we do from the bees, and these conical upside-down hives or treasuries of Atreus,[2] under the names of carrots, turnips, and radishes, have had important influence on human fortunes. If we do not steal the store, next year the plant lives upon it, raises its stem, flowers and seeds out of that abundance, and having fulfilled its destiny, and provided for its successor, passes away, root and branch together.

13. There is a pretty example of patience for us in this; and it would be well for young people generally to set themselves to grow in a carrotty or turnippy manner, and lay up secret store, not caring to exhibit it until the time comes for fruitful display. But they must not, in after-life, imitate the spendthrift vegetable, and blossom only in the strength of what they learned long ago; else they soon come to contemptible end. Wise people live like laurels and cedars, and go on mining in the earth, while they adorn and embalm the air.

14. Secondly, Refuges. As flowers growing on trees have to live for some time, when they are young, in their buds, so some flowers growing on the ground have to live

[1] [See below, p. 542.]

[2] [The so-called "bee-hive" construction of the Treasury of Atreus and other buildings at Mycenæ.]

for a while, when they are young, *in* what we call their roots. These are mostly among the Drosidæ * and other humble tribes, loving the ground; and, in their babyhood, liking to live quite down in it. A baby crocus has literally its own little dome—domus, or duomo—within which in early spring it lives a delicate convent life of its own, quite free from all worldly care and dangers, exceedingly ignorant of things in general, but itself brightly golden and perfectly formed before it is brought out. These subterranean palaces and vaulted cloisters,[1] which we call bulbs, are no more roots than the blade of grass is a root, in which the ear of corn forms before it shoots up.

15. Thirdly, Ruins. The flowers which have these subterranean homes form one of many families whose roots, as well as seeds, have the power of reproduction. The succession of some plants is trusted much to their seeds: a thistle sows itself by its down, an oak by its acorns; the companies of flying emigrants settle where they may; and the shadowy tree is content to cast down its showers of nuts for swine's food with the chance that here and there one may become a ship's bulwark. But others among plants are less careless, or less proud. Many are anxious for their children to grow in the place where they grew themselves, and secure this not merely by letting their fruit fall at their feet, on the chance of its growing up beside them, but by closer bond, bud springing forth from root, and the young plant being animated by the gradually surrendered life of its parent. Sometimes the young root is formed above the old one, as in the crocus, or beside it, as in the amaryllis, or beside it in a spiral succession, as in the orchis; in these cases the old root always perishes wholly when the

* Drosidæ, in our school nomenclature, is the general name, including the four great tribes, iris, asphodel, amaryllis, and lily. See reason for this name given in the *Queen of the Air*, Section II.[2]

[1] [See, again, p. 542.]

[2] [§ 79 (Vol. XIX. p. 371). And for "our school nomenclature," see below, p. 357.]

young one is formed; but in a far greater number of tribes, one root connects itself with another by a short piece of intermediate stem; and this stem does not at once perish when the new root is formed, but grows on at one end indefinitely, perishing slowly at the other, the scars or ruins of the past plants being long traceable on its sides. When it grows entirely underground it is called a root-stock. But there is no essential distinction between a root-stock and a creeping stem,[1] only the root-stock may be thought of as a stem which shares the melancholy humour of a root in loving darkness, while yet it has enough consciousness of better things to grow towards, or near, the light. In one family it is even fragrant where the flower is not, and a simple houseleek is called "rhodiola rosea," because its root-stock has the scent of a rose.

16. There is one very unusual condition of the root-stock which has become of much importance in economy, though it is of little in botany; the forming, namely, of knots at the ends of the branches of the underground stem, where the new roots are to be thrown out. Of these knots, or "tubers" (swollen things), one kind, belonging to the tobacco tribe, has been singularly harmful, together with its pungent relative, to a neighbouring country of ours, which perhaps may reach a higher destiny than any of its friends can conceive for it, if it can ever succeed in living without either the potato, or the pipe.[2]

17. Being prepared now to find among plants many things which are like roots, yet are not, you may simplify and make fast your true idea of a root as a fibre or group of fibres, which fixes, animates, and partly feeds the leaf. Then practically, as you examine plants in detail, ask first respecting them: What kind of root have they? Is it large or small in proportion to their bulk, and why is it so? What soil does it like, and what properties does it acquire from it? The endeavour to answer these questions

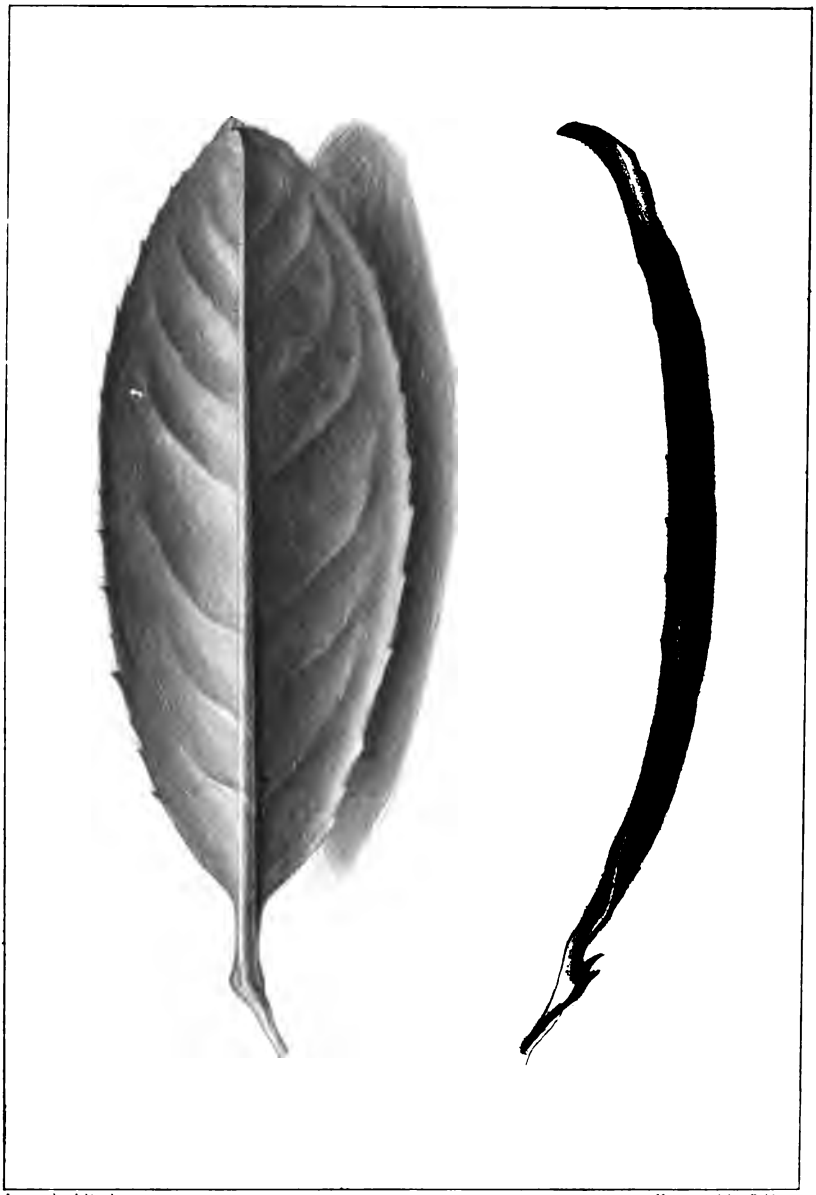
[1] [See, again, p. 542.]
[2] [Compare *Queen of the Air*, § 76 (Vol. XIX. pp. 368–369).]

will soon lead you to a rational inquiry into the plant's history. You will first ascertain what rock or earth it delights in, and what climate and circumstances; then you will see how its root is fitted to sustain it mechanically under given pressures and violences, and to find for it the necessary sustenance under given difficulties of famine or drought. Lastly you will consider what chemical actions appear to be going on in the root, or its store; what processes there are, and elements, which give pungency to the radish, flavour to the onion, or sweetness to the liquorice; and of what service each root may be made capable under cultivation, and by proper subsequent treatment, either to animals or men.

18. I shall not attempt to do any of this for you; I assume, in giving this advice, that you wish to pursue the science of botany as your chief study; I have only broken moments for it, snatched from my chief occupations, and I have done nothing myself of all this I tell you to do. But so far as you can work in this manner, even if you only ascertain the history of one plant, so that you know that accurately, you will have helped to lay the foundation of a true science of botany, from which the mass of useless nomenclature,* now mistaken for science, will fall away, as the husk of a poppy falls from the bursting flower.

* The only use of a great part of our existing nomenclature is to enable one botanist to describe to another a plant which the other has not seen. When the science becomes approximately perfect, all known plants will be properly figured, so that nobody need describe them; and unknown plants be so rare that nobody will care to learn a new and difficult language, in order to be able to give an account of what in all probability he will never see.

Univ. of
California



Drawn by J Ruskin. Engraved by G Allen.

Central Type of Leaves.

COMMON BAY-LAUREL.

## CHAPTER III

### THE LEAF

1. In the first of the poems of which the English Government has appointed[1] a portion to be sung every day for the instruction and pleasure of the people, there occurs this curious statement respecting any person who will behave himself rightly: "He shall be like a tree planted by the river side, that bears its fruit in its season. His leaf also shall not wither; and you will see that whatever he does will prosper."[2]

I call it a curious statement, because the conduct to which this prosperity is promised is not that which the English, as a nation, at present think conducive to prosperity: but whether the statement be true or not, it will be easy for you to recollect the two eastern figures under which the happiness of the man is represented,—that he is like a tree bearing fruit "in its season" (not so hastily as that the frost pinch it, nor so late that no sun ripens it); and that "his leaf shall not fade." I should like you to recollect this phrase in the Vulgate—"folium ejus non defluet"—shall not fall *away*,—that is to say, shall not fall so as to leave any visible bareness in winter time, but only that others may come up in its place, and the tree be always green.

2. Now, you know, the fruit of the tree is either for the continuance of its race, or for the good, or harm, of other creatures. In no case is it a good to the tree itself. It is not indeed, properly, a part of the tree at all, any more than the egg is part of the bird, or the young of any

[1] [Compare Vol. XXIV. p. 226 n.]

[2] [Psalms i. 3 (slightly varied by Ruskin). He quotes from the Vulgate in *Lectures on Art*: see Vol. XX. pp. 44, 109.]

creature part of the creature itself. But in the leaf is the strength of the tree itself. Nay, rightly speaking, the leaves *are* the tree itself. Its trunk sustains; its fruit burdens and exhausts; but in the leaf it breathes and lives. And thus also, in the eastern symbolism, the fruit is the labour of men for others; but the leaf is their own life. "He shall bring forth fruit, in his time; and his own joy and strength shall be continual."

3. Notice next the word "folium." In Greek, φύλλον, "phyllon."

"The thing that is born," or "put forth." "When the branch is tender, and putteth forth her leaves, ye know that summer is nigh."[1] The botanists say, "The leaf is an expansion of the bark of the stem." More accurately, the bark is a contraction of the tissue of the leaf. For every leaf is born out of the earth, and breathes out of the air; and there are many leaves that have no stems, but only roots. It is "the springing thing"; this thin film of life; rising, with its *edge* out of the ground—infinitely feeble, infinitely fair. With Folium, in Latin, is rightly associated the word Flos; for the flower is only a group of singularly happy leaves. From these two roots come foglio, feuille, feuillage, and fleur;—blume, blossom, and bloom; our foliage, and the borrowed foil, and the connected technical groups of words in architecture and the sciences.[2]

4. This *thin* film, I said. That is the essential character of a leaf; to be thin,—widely spread out in proportion to its mass. It is the opening of the substance of the earth to the air, which is the giver of life. The Greeks called it, therefore, not only the born or blooming thing, but the spread or expanded thing—"πέταλον." Pindar calls the beginnings of quarrel, "petals of quarrel."[3] Recollect, therefore, this form, Petalos; and connect it with Petasos, the

[1] [Matthew xxiv. 32.]
[2] [Compare Vol. XV. p. 386.]
[3] [*Isthmian Odes*, vii. 43: νεικέων πέταλα ("contentious votes," for the Athenians used sometimes to ballot with olive leaves).]

expanded cap of Mercury.[1] For one great use of both is to give shade. The root of all these words is said to be ΠΕΤ (Pet), which may easily be remembered in Greek, as it sometimes occurs in no unpleasant sense in English.

5. But the word "petalos" is connected in Greek with another word, meaning, to fly,—so that you may think of a bird as spreading its petals to the wind; and with another, signifying Fate in its pursuing flight, the overtaking thing, or overflying Fate.[2] Finally, there is another Greek word meaning "wide," πλατύς (platys); whence at last our "plate" —a thing made broad or extended—but especially made broad or "flat" out of the solid, as in a lump of clay extended on the wheel, or a lump of metal extended by the hammer.[3] So the first we call Platter; the second Plate, when of the precious metals. Then putting *b* for *p*, and *d* for *t*, we get the blade of an oar, and blade of grass.

6. Now gather a branch of laurel, and look at it carefully. You may read the history of the being of half the earth in one of those green oval leaves—the things that the sun and the rivers have made out of dry ground. Daphne —daughter of Enipeus,[4] and beloved by the Sun,—that fable gives you at once the two great facts about vegetation. Where warmth is, and moisture—there, also, the leaf. Where no warmth—there is no leaf; where there is no dew —no leaf.

7. Look, then, to the branch you hold in your hand. That you *can* so hold it, or make a crown of it, if you choose, is the first thing I want you to note of it;—the proportion of size, namely, between the leaf and *you*. Great part of your life and character, as a human creature, has depended on that. Suppose all leaves had been spacious, like some palm leaves; solid, like cactus stem; or that trees

[1] [Compare *Queen of the Air*, § 27 (Vol. XIX. p. 322).]

[2] [πέτομαι, and πότμος (fate), which word, according to the dictionaries, is from the same root *pet*.]

[3] [Compare *Aratra Pentelici*, § 9 (Vol. XX. p. 205).]

[4] [Rather, of the Peneus: see Vol. XIII. p. 149, where also the fable is explained.]

had grown, as they might of course just as easily have grown, like mushrooms, all one great cluster of leaf round one stalk. I do not say that they are divided into small leaves only for your delight, or your service, as if you were the monarch of everything—even in this atom of a globe. You are made of your proper size; and the leaves of theirs: for reasons, and by laws, of which neither the leaves nor you know anything. Only note the harmony between both, and the joy we may have in this division and mystery of the frivolous and tremulous petals, which break the light and the breeze,—compared to what, with the frivolous and tremulous mind which is in us, we could have had out of domes, or penthouses, or walls of leaf.

8. Secondly; think awhile of its dark clear green, and the good of it to you. Scientifically, you know green in leaves is owing to "chlorophyll,"[1] or, in English, to "green-leaf." It may be very fine to know that; but my advice to you, on the whole, is to rest content with the general fact that leaves are green when they do not grow in or near smoky towns; and not by any means to rest content with the fact that very soon there will not be a green leaf in England, but only greenish-black ones. And thereon resolve that you will yourself endeavour to promote the growing of the green wood, rather than of the black.

9. Looking at the back of your laurel-leaves, you see how the central rib or spine of each, and the lateral branchings, strengthen and carry it. I find much confused use, in botanical works, of the words Vein and Rib. For, indeed, there are veins *in* the ribs of leaves, as marrow in bones; and the projecting bars often gradually depress themselves into a transparent net of rivers. But the *mechanical* force of the framework in carrying the leaf-tissue is the point first to be noticed; it is that which admits, regulates, or restrains the visible motions of the leaf; while the system of circulation can only be studied through the microscope. But the ribbed leaf bears itself to the wind, as the webbed

[1] [On this term compare Vol. XIV. p. 283, and Vol. XIX. p. 355.]

foot of a bird does to the water, and needs the same kind, though not the same strength, of support; and its ribs always are partly therefore constituted of strong woody substance, which is knit out of the tissue; and you can extricate this skeleton framework, and keep it, after the leaf-tissue is dissolved. So I shall henceforward speak simply of the leaf and its ribs,—only specifying the additional veined structure on necessary occasions.

10. I have just said that the ribs—and might have said, farther, the stalk that sustains them—are knit out of the *tissue* of the leaf. But what is the leaf-tissue itself knit out of? One would think that was nearly the first thing to be discovered, or at least to be thought of, concerning plants, —namely, how and of what they are made. We say they "grow." But you know that they can't grow out of nothing; —this solid wood and rich tracery must be made out of some previously existing substance. What is the substance? —and how is it woven into leaves,—twisted into wood?

11. Consider how fast this is done, in spring. You walk in February over a slippery field, where, through hoar-frost and mud, you perhaps hardly see the small green blades of trampled turf. In twelve weeks you wade through the same field up to your knees in fresh grass; and in a week or two more, you mow two or three solid haystacks off it. In winter you walk by your currant-bush, or your vine. They are shrivelled sticks—like bits of black tea in the canister. You pass again in May, and the currant-bush looks like a young sycamore tree; and the vine is a bower: and meanwhile the forests, all over this side of the round world, have grown their foot or two in height, with new leaves—so much deeper, so much denser than they were. Where has it all come from? Cut off the fresh shoots from a single branch of any tree in May. Weigh them; and then consider that so much weight has been added to every such living branch, everywhere, this side the equator, within the last two months. What is all that made of?

12. Well, this much the botanists really know, and tell

us,—It is made chiefly of the breath of animals: that is to say, of the substance which, during the past year, animals have breathed into the air; and which, if they went on breathing, and their breath were not made into trees, would poison them, or rather suffocate them, as people are suffocated in uncleansed pits, and dogs in the Grotta del Cane.[1] So that you may look upon the grass and forests of the earth as a kind of green hoar-frost, frozen upon it from our breath, as, on the window-panes, the white arborescence of ice.

13. But how is it made into wood?

The substances that have been breathed into the air are charcoal, with oxygen and hydrogen,—or, more plainly, charcoal and water. Some necessary earth,—in smaller quantity, but absolutely essential,—the trees get from the ground; but, I believe all the charcoal they want, and most of the water, from the air. Now the question is, where and how do they take it in, and digest it into wood?

14. You know, in spring, and partly through all the year, except in frost, a liquid called "sap" circulates in trees, of which the nature, one should have thought, might have been ascertained by mankind in the six thousand years they have been cutting wood. Under the impression always that it *had been* ascertained, and that I could at any time

[1] [A cavern near Naples where the cruel experiment is shown to visitors of sending in dogs to be killed by the carbonic acid gas near its floor. Ruskin had visited it during his stay at Naples in 1841. A description is given in his diary:—

"*February* 18.—Yesterday one of the happiest days I have spent for many a year. A lovely morning, just wind enough to cool the sunshine, and we drove to the Lake of Agnano—its blue surface sprinkled with wild ducks, which one of the dogs connected with the Grotta del Cane (a fine brown beastie which had been scampering up and down the banks beside the carriage like the wind) sent out of the water till the wind whistled with their wings. The crater not so distinctly marked in the interior as from a distance. Close to the shore, near the point where we came down on the lake, the water rose in boiling bubbles, showing strong even through a violent ripple. Grotta del Cane excessively disappointing, as far as effect went; a nasty little hole in the rock, no bigger than a gipsy's refuge—so dirty looking, I would hardly go into it; but the instantaneous extinction of the torch, and the heavy feel even to the hand, and the floating of the fallen smoke, like sea on the surface of the fetid air, all excessively striking."]

know all about it, I have put off till to-day, 19th October, 1869, when I am past fifty, the knowing anything about it at all. But I will really endeavour now to ascertain something, and take to my botanical books, accordingly, in due order.

(1) Dresser's *Rudiments of Botany.*[1] "Sap" not in the index; only Samara, and Sarcocarp,—about neither of which I feel the smallest curiosity. (2) Figuier's[2] *Histoire des Plantes.** "Sêve," not in index; only Serpolet, and Sherardia arvensis, which also have no help in them for me. (3) Balfour's *Manual of Botany.*[3] "Sap,"—yes, at last. "Article 257. Course of fluids in exogenous stems." I don't care about the course just now: I want to know where the fluids come from. "If a plant be plunged into a weak solution of acetate of lead,"—I don't in the least want to know what happens. "From the minuteness of the tissue, it is not easy to determine the vessels through which the sap moves." Who said it was? If it had been easy, I should have done it myself. "Changes take place in the composition of the sap in its upward course." I dare say; but I don't know yet what its composition is before it begins going up. "The Elaborated Sap by Mr. Schultz has been called 'latex.'" I wish Mr. Schultz[4] were in a hogshead of it, with the top on. "On account of these movements in the latex, the laticiferous vessels have been denominated cinenchymatous." I do not venture to print the expressions which I here mentally make use of.

15. Stay,—here, at last, in Article 264, is something to the purpose: "It appears then that, in the case of Exogenous plants, the fluid matter in the soil, containing

* An excellent book, nevertheless.

[1] [*The Rudiments of Botany, Structural and Physiological*, by Christopher Dresser (Lecturer on Botany in the Department of Science and Art), 1859.]

[2] [*Histoire des Plantes*, par Louis Figuier, illustré de 415 figures: Paris, 1865.]

[3] [*A Manual of Botany*, by John Hutton Balfour, M.D., 1860. Ruskin's quotations are from pp. 132, 133, 135.]

[4] [Carl Heinrich Schultz, German botanist, author of *Die Natur der lebendigen Pflanze, Natürliches System des Pflanzenreichs* (1832), and other works.]

mind of the wild leafiness, nourished by snow, of the Bœotian Cithæron,—"Oh, thou lake-hollow, full of divine leaves, and of wild creatures, nurse of the snow, darling of Diana" (Phœnissæ, 801). How wild the climate of this pine region is, you may judge from the pieces in the note below* out of Colonel Leake's diary in crossing the Mænalian range in spring. And then, lastly, you have the laurel and vine region, full of sweetness and Elysian beauty.

28. Now as Mercury is the ruling power of the hill enchantment, so Daphne of the leafy peace. She is, in her first life, the daughter of the mountain river, the mist of it filling the valley; the Sun, pursuing, and effacing it, from dell to dell, is, literally, Apollo pursuing Daphne, and *adverse* to her (not, as in the earlier tradition, the Sun pursuing only his own light). Daphne, thus hunted, cries to her mother, the Earth, which opens, and receives

* *March 3rd.*—We now ascend the roots of the mountain called Kastaniá, and begin to pass between it and the mountain of Alonístena, which is on our right. The latter is much higher than Kastaniá, and, like the other peaked summits of the Mænalian range, is covered with firs, and deeply at present with snow. The snow lies also in our pass. At a fountain in the road, the small village of Bazeniko is half a mile on the right, standing at the foot of the Mænalian range, and now covered with snow.

Saetá is the most lofty of the range of mountains, which are in face of Levídhi, to the northward and eastward; they are all a part of the chain which extends from Mount Khelmós, and connects that great summit with Artemisium, Parthenium, and Parnon. Mount Saetá is covered with firs. The mountain between the plain of Levídhi and Alonístena, or, to speak by the ancient nomenclature, that part of the Mænalian range which separates the Orchomenia from the valleys of Helisson and Methydrium, is clothed also with large forests of the same trees; the road across this ridge from Levídhi to Alonístena is now impracticable on account of the snow.

I am detained all day at Levídhi by a heavy fall of snow, which before the evening has covered the ground to half a foot in depth, although the village is not much elevated above the plain, nor in a more lofty situation than Tripolitzá.

*March 4th.*—Yesterday afternoon and during the night the snow fell in such quantities as to cover all the plains and adjacent mountains; and the country exhibited this morning as fine a snow-scene as Norway could supply. As the day advanced and the sun appeared, the snow melted rapidly, but the sky was soon overcast again, and the snow began to fall.[1]

[1] [*Travels in the Morea*, by William Martin Leake, 3 vols., 1830, vol. ii. pp. 274, 277, 280. For other references to Leake's Travels in Greece, see Vol. XII. p. 185, and Vol. XXII. p. 258.]

her, causing the laurel to spring up in her stead. That is to say, wherever the rocks protect the mist from the sunbeam, and suffer it to water the earth, there the laurel and other richest vegetation fill the hollows, giving a better glory to the sun itself. For sunshine, on the torrent spray, on the grass of its valley, and entangled among the laurel stems, or glancing from their leaves, became a thousandfold lovelier and more sacred than the same sunbeams, burning on the leafless mountain-side.

And farther, the leaf, in its connection with the river, is typically expressive, not, as the flower was, of human fading and passing away, but of the perpetual flow and renewal of human mind and thought, rising "like the rivers that run among the hills";[1] therefore it was that the youth of Greece sacrificed their hair—the sign of their continually renewed strength,—to the rivers, and to Apollo.[2] Therefore, to commemorate Apollo's own chief victory over death—over Python, the corrupter,[3]—a laurel branch was gathered every ninth year in the vale of Tempe;[4] and the laurel leaf became the reward or crown of all beneficent and enduring work of man—work of inspiration, born of the strength of the earth, and of the dew of heaven, and which can never pass away.

29. You may doubt at first, even because of its grace, this meaning in the fable of Apollo and Daphne; you will not doubt it, however, when you trace it back to its first eastern origin. When we speak carelessly of the traditions respecting the Garden of Eden (or in Hebrew, remember, Garden of Delight), we are apt to confuse Milton's descriptions with those in the book of Genesis. Milton fills his Paradise with flowers;[5] but no flowers are spoken of in

[1] [Psalms civ. 10.]
[2] [See *Queen of the Air*, § 12 (Vol. XIX. p. 305).]
[3] [Compare Vol. VII. p. 420 *n.*]
[4] [See the account of the *Daphnephoria* given by Proclus (quoted by Photius, *Bibliotheca*, p. 321, ed. Bekker).]
[5] [*Paradise Lost*, iv. 241 *seq.*:—

"Flowers worthy of Paradise, which not nice Art
In beds and curious knots, but Nature boon
Poured forth profuse," etc.]

Genesis. We may indeed conclude that in speaking of every herb of the field, flowers are included. But they are not named. The things that are *named* in the Garden of Delight are trees only.

The words are, "every tree that was pleasant to the sight and good for food";[1] and as if to mark the idea more strongly for us in the Septuagint, even the ordinary Greek word for tree is not used, but the word ξύλον,—literally, every "wood," every piece of *timber* that was pleasant or good. They are indeed the "vivi travi,"—living rafters,—of Dante's Apennine.[2]

Do you remember how those trees were said to be watered? Not by the four rivers only. The rivers could not supply the place of rain. No rivers do; for in truth they are the refuse of rain. No storm-clouds were there, nor hidings of the blue by darkening veil; but there went up a *mist* from the earth, and watered the face of the ground, —or, as in Septuagint and Vulgate, "There went forth a fountain from the earth, and gave the earth to drink."[3]

30. And now, lastly, we continually think of that Garden of Delight, as if it existed, or could exist, no longer; wholly forgetting that it is spoken of in Scripture as perpetually existent; and some of its fairest trees as existent also, or only recently destroyed. When Ezekiel is describing to Pharaoh the greatness of the Assyrians, do you remember what image he gives of them? "Behold, the Assyrian was a cedar in Lebanon, with fair branches; and his top was among the thick boughs; the waters nourished him, and the deep brought him up, with her rivers running round about his plants. Under his branches did all the beasts of the field bring forth their young; and under his shadow dwelt all great nations."[4]

31. Now hear what follows. "The cedars *in the Garden*

[1] [Genesis ii. 9.]
[2] [*Purgatorio*, xxx. 85.]
[3] [Genesis ii. 6; compare *Sesame and Lilies*, § 99 (Vol. XVIII. p. 147).]
[4] [Ezekiel xxxi. 3; quoted also in Vol. XIV. p. 275.]

*of God* could not hide *him*. The fir trees were not like his boughs, and the chestnut trees were not like his branches: nor any tree in the Garden of God was like unto him in beauty."

So that you see, whenever a nation rises into consistent, vital, and, through many generations, enduring power, *there* is still the Garden of God; still it is the water of life which feeds the roots of it; and still the succession of its people is imaged by the perennial leafage of trees of Paradise. Could this be said of Assyria, and shall it not be said of England? How much more, of lives such as ours should be,—just, laborious, united in aim, beneficent in fulfilment,—may the image be used of the leaves of the trees of Eden! Other symbols have been given often to show the evanescence and slightness of our lives—the foam upon the water, the grass on the housetop, the vapour that vanishes away;[1] yet none of these are images of true human life. That life, when it is real, is *not* evanescent; is *not* slight; does *not* vanish away. Every noble life leaves the fibre of it interwoven for ever in the work of the world; by so much, evermore, the strength of the human race has gained; more stubborn in the root, higher towards heaven in the branch; and, "as a teil tree, and as an oak,—whose substance is in them when they cast their leaves,—so the holy seed is in the midst thereof."[2]

82. Only remember on what conditions. In the great Psalm of life,[3] we are told that everything that a man doeth shall prosper, so only that he delight in the law of his God, that he hath not walked in the counsel of the wicked, nor sat in the seat of the scornful. Is it among these leaves of the perpetual Spring,—helpful leaves for the healing of the nations,[4]—that we mean to have our part and place, or rather among the "brown skeletons of leaves that lag

[1] [Hosea x. 7; 2 Kings xix. 26; James iv. 14 (compare Vol. XVIII. pp. 61, 146).]
[2] [Isaiah vi. 13.]
[3] [The first Psalm: see above, p. 229.]
[4] [Revelation xxii. 2.]

the forest brook along"?[1] For other leaves there are, and other streams that water them,—not water of life, but water of Acheron. Autumnal leaves there are that strew the brooks, in Vallombrosa.[2] Remember you how the name of the place was changed: "Once called 'Sweet water' (Aqua bella), now, the Shadowy Vale."[3] Portion in one or other name we must choose, all of us,—with the living olive, by the living fountains of waters, or with the wild fig trees, whose leafage of human soul is strewed along the brooks of death, in the eternal Vallombrosa.

[1] [Coleridge: *The Ancient Mariner*, part vii. ("Brown skeletons of leaves that lag My forest-brook along").]
[2] [*Paradise Lost*, i. 302: quoted also in Vol. XVIII. p. 255.]
[3] [Rogers's *Italy* ("The Great St. Bernard"):—

"that sequestered spot,
Once called 'Sweet Waters,' now the 'Shady Vale.'"]

# CHAPTER IV

## THE FLOWER

ROME, *Whit Monday*, 1874.

1. ON the quiet road leading from under the Palatine to the little church of St. Nereo and Achilleo,[1] I met, yesterday morning, group after group of happy peasants heaped in pyramids on their triumphal carts, in Whit-Sunday dress, stout and clean, and gay in colour; and the women all with bright artificial roses in their hair, set with true natural taste, and well becoming them. This power of arranging wreath or crown of flowers for the head, remains to the people from classic times. And the thing that struck me most in the look of it was not so much the cheerfulness, as the dignity;—in a true sense, the *becomingness* and decorousness of the ornament. Among the ruins of the dead city, and the worst desolation of the work of its modern rebuilders, here was one element at least of honour, and order;—and, in these, of delight.

And these are the real significances of the flower itself. It is the utmost purification of the plant, and the utmost discipline. Where its tissue is blanched fairest, dyed purest, set in strictest rank, appointed to most chosen office, there —and created by the fact of this purity and function—is the flower.

2. But created, observe, by the purity and order, more than by the function. The flower exists for its own sake, —not for the fruit's sake.[2] The production of the fruit is an added honour to it—is a granted consolation to us for

[1] [See the letter from *Hortus Inclusus* on "The Lost Church in the Campagna" (June 2, 1874), reprinted in a later volume of this edition.]

[2] [Compare *Queen of the Air*, § 60 (Vol. XIX. pp. 357–358), and *Præterita*, i. § 59.]

its death. But the flower is the end of the seed,—not the seed of the flower. You are fond of cherries, perhaps; and think that the use of cherry blossom is to produce cherries. Not at all. The use of cherries is to produce cherry blossom; just as the use of bulbs is to produce hyacinths,—not of hyacinths to produce bulbs. Nay, that the flower can multiply by bulb, or root, or slip, as well as by seed, may show you at once how immaterial the seed-forming function is to the flower's existence. A flower is to the vegetable substance what a crystal is to the mineral. "Dust of sapphire," writes my friend Dr. John Brown[1] to me, of the wood hyacinths of Scotland in the spring. Yes, that is so,—each bud more beautiful, itself, than perfectest jewel—*this*, indeed, jewel "of purest ray serene";[2] but, observe you, the glory is in the purity, the serenity, the radiance,—not in the mere continuance of the creature.

3. It is because of its beauty that its continuance is worth Heaven's while. The glory of it is in being,—not in begetting; and in the spirit and substance,—not the change. For the earth also has its flesh and spirit. Every day of spring is the earth's Whit Sunday—Fire Sunday. The falling fire of the rainbow, with the order of its zones, and the gladness of its covenant,—you may eat of it, like Esdras;[3] but you feed upon it only that you may see it. Do you think that flowers were born to nourish the blind?

Fasten well in your mind, then, the conception of order, and purity, as the essence of the flower's being, no less than of the crystal's. A ruby is not made bright to scatter round it child-rubies; nor a flower, but in collateral and added honour, to give birth to other flowers.

Two main facts, then, you have to study in every flower: the symmetry or order of it, and the perfection of its substance; first, the manner in which the leaves are

[1] [See *Præterita*, ii. § 227, and compare Vol. XII. p. xx.]
[2] [Gray's *Elegy*, line 53.]
[3] [2 Esdras ix. 24 ("But go into a field of flowers, where no house is builded, and eat only the flowers of the field").]

placed for beauty of form; then the spinning and weaving and blanching of their tissue, for the reception of purest colour, or refining to richest surface.

4. First, the order: the proportion, and answering to each other, of the parts; for the study of which it becomes necessary to know what its parts are; and that a flower consists essentially of—— Well, I really don't know what it consists essentially of. For some flowers have bracts, and stalks, and toruses, and calices, and corollas, and discs, and stamens, and pistils, and ever so many odds and ends of things besides, of no use at all, seemingly; and others have no bracts, and no stalks, and no toruses, and no calices, and no corollas, and nothing recognizable for stamens or pistils,—only, when they come to be reduced to this kind of poverty, one doesn't call them flowers; they get together in knots, and one calls them catkins, or the like, or forgets their existence altogether;—I haven't the least idea, for instance, myself, what an oak blossom is like; only I know its bracts get together and make a cup of themselves afterwards, which the Italians call, as they do the dome of St. Peter's, "cupola"; and that it is a great pity, for their own sake as well as the world's, that they were not content with their ilex cupolas, which were made to hold something, but took to building these big ones upside-down, which hold nothing—*less* than nothing,—large extinguishers of the flame of Catholic religion. And for farther embarrassment, a flower not only is without essential consistence of a given number of parts, but it rarely consists, alone, of *itself*. One talks of a hyacinth as of a flower; but a hyacinth is any number of flowers. One does not talk of "a heather"; when one says "heath," one means the whole plant, not the blossom,—because heath-bells, though they grow together for company's sake, do so in a voluntary sort of way, and are not fixed in their places; and yet, they depend on each other for effect, as much as a bunch of grapes.

5. And this grouping of flowers, more or less waywardly, is the most subtle part of their order, and the most difficult

to represent. Take that cluster of bog-heather bells, for instance, Line-study I.[1] You might think at first there were no lines in it worth study; but look at it more carefully. There are twelve bells in the cluster. There may be fewer, or more; but the bog-heath is apt to run into something near that number. They all grow together as close as they can, and on one side of the supporting branch only. The natural effect would be to bend the branch down; but the branch won't have that, and so leans back to carry them. Now you see the use of drawing the profile in the middle figure: it shows you the exactly balanced setting of the group,—not drooping, nor erect; but with a disposition to droop, tossed up by the leaning back of the stem. Then, growing as near as they can to each other, those in the middle get squeezed. Here is another quite special character. Some flowers don't like being squeezed at all (fancy a squeezed convolvulus!); but these heather bells like it, and look all the prettier for it,—not the squeezed ones exactly, by themselves, but the cluster altogether, by their patience.

Then also the outside ones get pushed into a sort of star-shape, and in front show the colour of all their sides, and at the back the rich green cluster of sharp leaves that hold them; all this order being as essential to the plant as any of the more formal structures of the bell itself.

6. But the bog-heath has usually only one cluster of flowers to arrange on each branch. Take a spray of ling (Frontispiece[2]), and you will find that the richest piece of Gothic spire-sculpture would be dull and graceless beside the grouping of the floral masses in their various life. But it is difficult to give the accuracy of attention necessary to see their beauty without drawing them; and still more difficult to draw them in any approximation to the truth before they change. This is indeed the fatallest obstacle to all good botanical work. Flowers, or leaves,—and especially the last,—can only be rightly drawn as they grow. And

[1] [Plate X. p. 205.]
[2] [To *Proserpina*; Plate IX. p. 189. For another reference to the Plate, see p. 371.]

even then, in their loveliest spring action, they grow as you draw them, and will not stay quite the same creatures for half-an-hour.

7. I said in my inaugural lectures at Oxford, § 107, that real botany is not so much the description of plants as their biography.[1] Without entering at all into the history of its fruitage, the life and death of the blossom *itself* is always an eventful romance, which must be completely told, if well. The grouping given to the various states of form between bud and flower is always the most important part of the design of the plant; and in the modes of its death are some of the most touching lessons, or symbolisms, connected with its existence. The utter loss and far-scattered ruin of the cistus and wild rose,—the dishonoured and dark contortion of the convolvulus,—the pale wasting of the crimson heath of Apennine, are strangely opposed by the quiet closing of the brown bells of the ling, each making of themselves a little cross as they die; and so enduring into the days of winter. I have drawn the faded beside the full branch, and know not which is the more beautiful.

8. This grouping, then, and way of treating each other in their gathered company, is the first and most subtle condition of form in flowers; and, observe, I don't mean, just now, the appointed and disciplined grouping, but the wayward and accidental. Don't confuse the beautiful consent of the cluster in these sprays of heath with the legal strictness of a foxglove,—though that also has its divinity; but of another kind. That legal order of blossoming—for which we may wisely keep the accepted name, "inflorescence,"—is itself quite a separate subject of study, which we cannot take up until we know the still more strict laws which are set over the flower itself.

9. I have in my hand a small red poppy which I gathered on Whit Sunday on the palace of the Cæsars. It is an intensely simple, intensely floral, flower. All silk and flame: a scarlet cup, perfect-edged all round, seen

[1] [Vol. XX. p. 101.]

among the wild grass far away, like a burning coal fallen from Heaven's altars. You cannot have a more complete, a more stainless, type of flower absolute; inside and outside, *all* flower. No sparing of colour anywhere—no outside coarsenesses—no interior secrecies; open as the sunshine that creates it; fine-finished on both sides, down to the extremest point of insertion on its narrow stalk; and robed in the purple of the Cæsars.[1]

Literally so. That poppy scarlet, so far as it could be painted by mortal hand, for mortal King, stays yet, against the sun, and wind, and rain, on the walls of the house of Augustus, a hundred yards from the spot where I gathered the weed of its desolation.

10. A pure *cup*, you remember it is; that much at least you cannot but remember, of poppy-form among the corn-fields; and it is best, in beginning, to think of every flower as essentially a cup. There are flat ones, but you will find that most of these are really groups of flowers, not single blossoms; and there are out-of-the-way and quaint ones, very difficult to define as of any shape; but even these have a cup to begin with, deep down in them. You had better take the idea of a cup or vase, as the first, simplest, and most general form of true flower.

The botanists call it a corolla, which means a garland, or a kind of crown; and the word is a very good one, because it indicates that the flower-cup is made, as our clay cups are, on a potter's wheel; that it is essentially a *revolute* form—a whirl or (botanically) "whorl" of leaves; in reality successive round the base of the urn they form.

11. Perhaps, however, you think poppies in general are not much like cups. But the flower in my hand is a—poverty-*stricken* poppy, I was going to write,——poverty-*strengthened* poppy, I mean. On richer ground, it would have gushed into flaunting breadth of untenable purple—flapped its inconsistent scarlet vaguely to the wind—dropped the pride of its petals over my hand in an hour after I

[1] [See below, p. 267.]

gathered it. But this little rough-bred thing, a Campagna pony of a poppy, is as bright and strong to-day as yesterday. So that I can see exactly where the leaves join or lap over each other; and when I look down into the cup, find it to be composed of four leaves altogether,—two smaller, set within two larger.

12. Thus far (and somewhat farther) I had written in Rome; but now, putting my work together in Oxford, a sudden doubt troubles me, whether all poppies have two petals smaller than the other two. Whereupon I take down an excellent little school-book on botany—the best I've yet found, thinking to be told quickly; and I find a great deal about opium; and, apropos of opium, that the juice of common celandine is of a bright orange colour; and I pause for a bewildered five minutes, wondering if a celandine is a poppy, and how many petals *it* has: going on again—because I must, without making up my mind, on either question—I am told to "observe the floral receptacle of the Californian genus Eschscholtzia." Now I can't observe anything of the sort, and I don't want to; and I wish California and all that's in it were at the deepest bottom of the Pacific. Next I am told to compare the poppy and water-lily; and I can't do that, neither—though I should like to; and there's the end of the article; and it never tells me whether one pair of petals is always smaller than the other, or not. Only I see it says the corolla has four petals. Perhaps a celandine may be a double poppy, and have eight. I know they're tiresome irregular things, and I mustn't be stopped by them;*—at any rate, my

* Just in time, finding a heap of gold under an oak tree some thousand years old, near Arundel,[1] I've made them out: Eight, divided by three; that is to say, three couples of petals, with two odd little ones inserted for form's sake. No wonder I couldn't decipher them by memory.

[1] [At Peppering, where he stayed with the Drewitts (see above, p. 150). The diary fixes the day:—

"*May* 15, 1875.—Yesterday into Arundel Park. . . . Walked with Drewitt over downs, Copley Fielding glorious view, down into apple-blossom dingle with spring; saw pretty water-rat swimming under water,—divine; then oaks with celandine below,—diviner still."]

Roman poppy knew what it was about, and had its two couples of leaves in clear subordination, of which at the time I went on to inquire farther, as follows.

13. The next point is, what shape are the petals of? And that is easier asked than answered; for when you pull them off, you find they won't lie flat, by any means, but are each of them cups, or rather shells, themselves; and that it requires as much conchology as would describe a cockle, before you can properly give account of a single poppy leaf. Or of a single *any* leaf—for all leaves are either shells, or boats (or solid, if not hollow, masses), and cannot be represented in flat outline. But, laying these as flat as they will lie on a sheet of paper, you will find the piece they hide of the paper they lie on can be drawn; giving approximately the shape of the outer leaf as at A, that of the inner as at B, Fig. 4; which you will find very difficult lines to draw, for they are each composed of two curves, joined, as in Fig. 5; all above the line *a b* being the outer edge of the leaf, but joined so subtly to the side that the least break in drawing the line spoils the form.

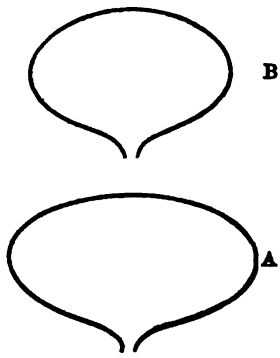


Fig. 4

14. Now every flower petal consists essentially of these two parts, variously proportioned and outlined. It expands from C to *a b*; and closes in the external line, and for this reason.

Considering every flower under the type of a cup, the first part of the petal is that in which it expands from the bottom to the rim; the second part, that in which it terminates itself on reaching the rim. Thus let the three circles (A, B, C), Fig. 6, represent the undivided cups of the three great geometrical orders of flowers—trefoil, quatrefoil, and cinquefoil.

Draw in the first an equilateral triangle, in the second

a square, in the third a pentagon; draw the dark lines from centres to angles (D, E, F): then (*a*) the third part of D, (*b*) the fourth part of E, (*c*) the fifth part of F, are

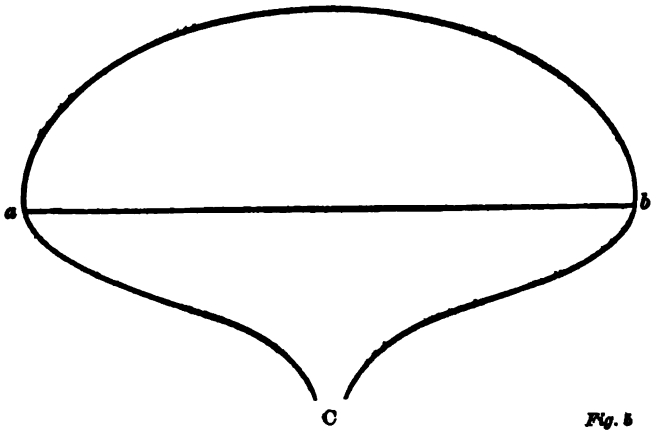


Fig. 5

the normal outline forms of the petals of the three families; the relations between the developing angle and limiting curve being varied according to the depth of cup, and the degree of connection between the petals. Thus a rose folds them over one another, in the bud; a convolvulus twists them,—the one expanding into a flat cinquefoil of separate petals, and the other into a deep-welled cinquefoil of connected ones.

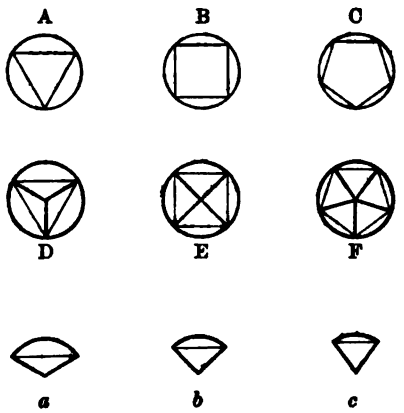


Fig. 6

I find an excellent illustration in Veronica Polita,[1] one of the most perfectly graceful of field plants because of the light alternate flower stalks, each with its leaf at the base; the flower itself a quatrefoil, of which the largest and least petals are uppermost. Pull one off its calyx (draw, if you can, the outline of the striped

[1] [For farther notices of this flower, see below, pp. 442, 474.]

blue upper petal with the jagged edge of pale gold below), and then examine the relative shapes of the lateral, and least upper petal. Their under surface is very curious, as if covered with white paint; the blue stripes above, in the direction of their growth, deepening the more delicate colour with exquisite insistence.

A lilac blossom will give you a pretty example of the expansion of the petals of a quatrefoil above the edge of the cup or tube; but I must get back to our poppy at present.

15. What outline its petals really have, however, is little shown in their crumpled fluttering; but that very crumpling arises from a fine floral character which we do not enough value in them. We usually think of the poppy as a coarse flower; but it is the most transparent and delicate of all the blossoms of the field. The rest—nearly all of them—depend on the *texture* of their surfaces for colour. But the poppy is painted *glass;* it never glows so brightly as when the sun shines through it. Wherever it is seen—against the light or with the light—always, it is a flame, and warms the wind like a blown ruby.

In these two qualities, the accurately balanced form, and the perfectly infused colour of the petals, you have, as I said, the central being of the flower. All the other parts of it are necessary, but we must follow them out in order.

16. Looking down into the cup, you see the green boss divided by a black star,—of six rays only,—and surrounded by a few black spots. My rough-nurtured poppy contents itself with these for its centre; a rich one would have had the green boss divided by a dozen of rays, and surrounded by a dark crowd of crested threads.

This green boss is called by botanists the pistil, which word consists of the two first syllables of the Latin pistillum, otherwise more familiarly Englished into "pestle." The meaning of the botanical word is of course, also, that the central part of a flower-cup has to it something of the relations that a pestle has to a mortar! Practically,

however, as this pestle has no pounding functions, I think the word is misleading as well as ungraceful; and that we may find a better one after looking a little closer into the matter. For this pestle is divided generally into three very distinct parts: there is a storehouse at the bottom of it for the seeds of the plant; above this, a shaft, often of considerable length in deep cups, rising to the level of their upper edge, or above it; and at the top of these shafts an expanded crest. This shaft the botanists call "style," from the Greek word for a pillar; and the crest of it—I do not know why—stigma, from the Greek word for "spot." The storehouse for the seeds they call the "ovary," from the Latin ovum, an egg. So you have two-thirds of a Latin word (pistil)—awkwardly and disagreeably edged in between pestle and pistol—for the whole thing; you have an English-Latin word (ovary) for the bottom of it; an English-Greek word (style) for the middle; and a pure Greek word (stigma) for the top.

17. This is a great mess of language, and all the worse that the words style and stigma have both of them quite different senses in ordinary and scholarly English from this forced botanical one. And I will venture therefore, for my own pupils, to put the four names altogether into English. Instead of calling the whole thing a pistil, I shall simply call it the pillar. Instead of "ovary,"[1] I shall say "Treasury" (for a seed isn't an egg, but it *is* a treasure). The style I shall call the "Shaft," and the stigma the "Volute." So you will have your entire pillar divided into the treasury, at its base, the shaft, and the volute; and I think you will find these divisions easily remembered, and not unfitted to the sense of the words in their ordinary use.

18. Round this central, but, in the poppy, very stumpy, pillar, you find a cluster of dark threads, with dusty pendants or cups at their ends. For these the botanists' name "stamens," may be conveniently retained, each consisting of a "filament," or thread, and an "anther," or blossoming part,

[1] [Compare, below, p. 372.]

And in this rich corolla, and pillar, or pillars, with their treasuries, and surrounding crowd of stamens, the essential flower consists. Fewer than these several parts, it cannot have, to be a flower at all; of these, the corolla leads, and is the object of final purpose. The stamens and the treasuries are only there in order to produce future corollas, though often themselves decorative in the highest degree.

These, I repeat, are all the essential parts of a flower. But it would have been difficult, with any other than the poppy, to have shown you them alone; for nearly all other flowers keep with them, all their lives, their nurse or tutor leaves,—the group which, in stronger and humbler temper, protected them in their first weakness, and formed them to the first laws of their being. But the poppy casts these tutorial leaves away. It is the finished picture of impatient and luxury-loving youth,—at first too severely restrained, then casting all restraint away—yet retaining to the end of life unseemly and illiberal signs of its once compelled submission to laws which were only pain,—not instruction.

19. Gather a green poppy bud, just when it shows the scarlet line at its side; break it open and unpack the poppy. The whole flower is there complete in size and colour,—its stamens full-grown, but all packed so closely that the fine silk of the petals is crushed into a million of shapeless wrinkles. When the flower opens, it seems a deliverance from torture: the two imprisoning green leaves are shaken to the ground; the aggrieved corolla smooths itself in the sun, and comforts itself as it can; but remains visibly crushed and hurt to the end of its days.

20. Not so flowers of gracious breeding. Look at these four stages in the young life of a primrose, Fig. 7. First confined, as strictly as the poppy within five pinching green leaves, whose points close over it, the little thing is content to remain a child, and finds its nursery large enough. The green leaves unclose their points,—the little yellow ones peep out, like ducklings. They find the light delicious, and open wide to it; and grow, and grow, and throw themselves

wider at last into their perfect rose. But they never leave their old nursery for all that; it and they live on together; and the nursery seems a part of the flower.

21. Which is so, indeed, in all the loveliest flowers; and, in usual botanical parlance, a flower is said to consist of its calyx (or *hiding* part—Calypso having rule over it), and corolla, or garland part, Proserpina having rule over it. But it is better to think of them always as separate; for

*Fig. 7*

this calyx, very justly so named from its main function of concealing the flower, in its youth is usually green, not coloured, and shows its separate nature by pausing, or at least greatly lingering, in its growth, and modifying itself very slightly, while the corolla is forming itself through active change. Look at the two, for instance, through the youth of a pease blossom, Fig. 8.

*Fig. 8*

The entire cluster at first appears pendent in this manner, the stalk bending round on purpose to put it into that position. On which all the little buds, thinking themselves ill-treated, determine not to submit to anything of the sort, turn their points upwards persistently,

and determine that—at any cost of trouble—they will get nearer the sun. Then they begin to open, and let out their corollas. I give the progress of one only (Fig. 9).* It chances to be engraved the reverse way from the bud; but that is of no consequence.

Fig. 9

At first, you see the long lower point of the calyx thought that *it* was going to be the head of the family, and curls upwards eagerly. Then the little corolla steals out; and soon does away with that impression on the mind of the calyx. The corolla soars up with widening wings, the abashed calyx retreats beneath; and finally the great upper leaf of corolla—not pleased at having its back still turned to the light, and its face down—throws itself entirely back, to look at the sky, and nothing else;—and your blossom is complete.

Keeping, therefore, the ideas of calyx and corolla entirely distinct, this one general point you may note of both: that, as a calyx is originally folded tight over the flower, and has to open deeply to let it out, it is nearly always composed of sharp-pointed leaves like the segments of a balloon; while corollas, having to open out as wide as possible to show themselves, are typically like cups or plates, only cut into their edges here and there, for ornamentation's sake.

22. And, finally, though the corolla is essentially the floral group of leaves, and usually receives the glory of colour for itself only, this glory and delight may be given

* Figs. 8 and 9 are both drawn and engraved by Mr. Burgess.

to any other part of the group; and, as if to show us that there is no really dishonoured or degraded membership, the stalks and leaves in some plants, near the blossom, flush in sympathy with it, and become themselves a part of the effectively visible flower;—Eryngo[1]—Jura hyacinth (comosus), and the edges of upper stems and leaves in many plants; while others (Geranium lucidum) are made to delight us with their leaves rather than their blossoms; only I suppose, in these, the scarlet leaf colour is a kind of early autumnal glow,—a beautiful hectic, and foretaste, in sacred youth, of sacred death.

I observe, among the speculations of modern science, several, lately, not uningenious, and highly industrious, on the subject of the relation of colour in flowers, to insects—to selective development, etc., etc. There *are* such relations, of course. So also, the blush of a girl, when she first perceives the faltering in her lover's step as he draws near, is related essentially to the existing state of her stomach; and to the state of it through all the years of her previous existence. Nevertheless, neither love, chastity, nor blushing, are merely exponents of digestion.

All these materialisms, in their unclean stupidity, are essentially the work of human bats; men of semi-faculty or semi-education, who are more or less incapable of so much as seeing, much less thinking about, colour; among whom, for one-sided intensity, even Mr. Darwin must be often ranked, as in his vespertilian treatise on the ocelli of the Argus pheasant[2] which he imagines to be artistically gradated, and perfectly imitative of a ball and socket. If I had him here in Oxford for a week, and could force him to try to copy a feather by Bewick, or to draw for himself a boy's thumbed marble, his notions of feathers, and balls, would be changed

[1] [The Field Eryngo, a species of Eryngium (sea-holly).]

[2] ["Formation and Variability of the Ocelli or Eye-like Spots on the Plumage of Birds" in pt. ii. ch. xiv. of the *Descent of Man*. Compare *Eagle's Nest*, § 185 (Vol. XXII. p. 247). The following references are to pt. ii. chaps. xiii. and xviii. For "vespertilian science," see below, p. 268. The epithet ("bat-like") is explained by reference to *Eagle's Nest*, § 22 (Vol. XXII. p. 139), and *Fors Clavigera*, Letter 74, § 8.]

for all the rest of his life. But his ignorance of good art is no excuse for the acutely illogical simplicity of the rest of his talk of colour in the *Descent of Man*. Peacocks' tails, he thinks, are the result of the admiration of blue tails in the minds of well-bred peahens,—and similarly, mandrills' noses the result of the admiration of blue noses in well-bred baboons. But it never occurs to him to ask why the admiration of blue noses is healthy in baboons, so that it develops their race properly, while similar maidenly admiration either of blue noses or red noses in men would be improper, and develop the race improperly. The word itself "proper" being one of which he has never asked, or guessed, the meaning. And when he imagined the gradation of the cloudings in feathers to represent successive generation, it never occurred to him to look at the much finer cloudy gradations in the clouds of dawn themselves; and explain the modes of sexual preference and selective development which had brought *them* to their scarlet glory, before the cock could crow thrice.[1]

Putting all these vespertilian speculations out of our way, the human facts concerning colour are briefly these. Wherever men are noble, they love bright colour;[2] and wherever they can live healthily, bright colour is given them—in sky, sea, flowers, and living creatures.

On the other hand, wherever men are ignoble and sensual, they endure without pain, and at last even come to like (especially if artists) mud-colour and black, and to dislike rose-colour and white. And wherever it is unhealthy for them to live, the poisonousness of the place is marked by some ghastly colour in air, earth, or flowers.

There are, of course, exceptions to all such widely founded laws; there are poisonous berries of scarlet, and pestilent skies that are fair. But, if we once honestly compare a venomous wood-fungus, rotting into black dissolution of dripped slime at its edges, with a spring gentian; or a

[1] [See Matthew xxvi. 34.]
[2] [Compare Vol. X. p. 172, and Vol. XV. pp. 420–421.]

puff adder with a salmon trout, or a fog in Bermondsey with a clear sky at Berne, we shall get hold of the entire question on its right side; and be able afterwards to study at our leisure, or accept without doubt or trouble, facts of apparently contrary meaning. And the practical lesson which I wish to leave with the reader is, that lovely flowers, and green trees growing in the open air, are the proper guides of men to the places which their Maker intended them to inhabit; while the flowerless and treeless deserts—of reed, or sand, or rock,—are meant to be either heroically invaded and redeemed, or surrendered to the wild creatures which are appointed for them; happy and wonderful in their wild abodes.[1]

Nor is the world so small but that we may yet leave in it also unconquered spaces of beautiful solitude; where the chamois and red deer may wander fearless,—nor any fire of avarice scorch from the Highlands of Alp, or Grampian, the rapture of the heath,[2] and the rose.

[1] [See vol. ii. ch. iv. § 20 (p. 463), where Ruskin refers to the closing passages of the present chapter.]

[2] [On this phrase, see below, p. 363.]

## CHAPTER V

### PAPAVER RHOEAS

BRANTWOOD, *July 11th*, 1875.

1. CHANCING to take up yesterday a favourite old book, Mavor's *British Tourists* (London, 1798[1]), I found in its fourth volume a delightful diary of a journal made in 1782 through various parts of England, by Charles P. Moritz of Berlin.

And in the fourteenth page of this diary I find the following passage, pleasantly complimentary to England:—

"The slices of bread and butter which they give you with your tea are as thin as poppy leaves. But there is another kind of bread and butter usually eaten with tea, which is toasted by the fire, and is incomparably good. This is called 'toast.'"

I wonder how many people, nowadays, whose bread and butter was cut too thin for them, would think of comparing the slices to poppy leaves? But this was in the old days of travelling, when people did not whirl themselves past corn-fields, that they might have more time to walk on paving-stones; and understood that poppies did not mingle their scarlet among the gold, without some purpose of the poppy-Maker that they should be looked at.

Nevertheless, with respect to the good and polite German's poetically-contemplated, and finely æsthetic, tea, may it not be asked whether poppy leaves themselves, like the bread and butter, are not, if we may venture an opinion—*too* thin,—im-*properly* thin? In the last chapter, my reader was, I hope, a little anxious to know what I meant by saying that modern philosophers did not know the meaning

[1] [*The British Tourists; or, Traveller's Pocket Companion through England, Wales, Scotland, and Ireland*, by William Mavor, LL.D., London, 1798–1800, 6 vols.]

of the word "proper," and may wish to know what I mean by it myself. And this I think it needful to explain before going farther.

2. In our English prayer-book translation, the first verse of the ninety-third Psalm runs thus: "The Lord is King; and hath put on glorious apparel." And although, in the future republican world, there are to be no lords, no kings, and no glorious apparel, it will be found convenient, for botanical purposes, to remember what such things once were; for when I said of the poppy, in last chapter, that it was "robed in the purple of the Cæsars,"[1] the words gave, to any one who had a clear idea of a Cæsar, and of his dress, a better, and even *stricter*, account of the flower than if I had only said, with Mr. Sowerby, "petals bright scarlet";[2] which might just as well have been said of a pimpernel, or scarlet geranium;—but of neither of these latter should I have said "robed in purple of Cæsars." What I meant was, first, that the poppy leaf looks dyed through and through, like glass,[3] or Tyrian tissue; and not merely painted: secondly, that the splendour of it is proud, —almost insolently so. Augustus, in his glory, might have been clothed like one of these; and Saul; but not David, nor Solomon; still less the teacher of Solomon, when He puts on "glorious apparel."[4]

3. Let us look, however, at the two translations of the same verse.

In the Vulgate it is "Dominus regnavit; decorem indutus est"; He has put on "becomingness,"—decent apparel, rather than glorious.

In the Septuagint it is *εὐπρέπεια*—*well*-becomingness; an expression which, if the reader considers, must imply certainly the existence of an opposite idea of possible "*ill*-becomingness,"—of an apparel which should, in just as

[1] [See above, p. 254.]

[2] [*English Botany; or, Coloured Figures of British Plants*, edited by J. T. B. Syme, the figures by J. E. Sowerby, 3rd edition, 1863, vol. i. p. 88. For a general note on Sowerby's *Botany*, see p. 421.]

[3] [See above, ch. iv. § 15, p. 258; and compare, below, p. 393.]

[4] [See Matthew vi. 29.]

accurate a sense, belong appropriately to the creature invested with it, and yet not be glorious, but inglorious, and not well-becoming, but ill-becoming. The mandrill's blue nose, for instance, already referred to,[1]—can we rightly speak of this as "εὐπρέπεια"? Or the stings, and minute, colourless blossoming of the nettle? May we call these a glorious apparel, as we may the glowing of an Alpine rose?

You will find on reflection, and find more convincingly the more accurately you reflect, that there is an absolute sense attached to such words as "decent," "honourable," "glorious," or "καλός," contrary to another absolute sense in the words "indecent," "shameful," "vile," or "αἰσχρός."

And that there is every degree of these absolute qualities visible in living creatures; and that the divinity of the Mind of man is in its essential discernment of what is καλόν from what is αἰσχρόν, and in his preference of the kind of creatures which are decent, to those which are indecent; and of the kinds of thoughts, in himself, which are noble, to those which are vile.

4. When therefore I said that Mr. Darwin, and his school,* had no conception of the real meaning of the word "proper," I meant that they conceived the qualities of things only as their "properties," but not as their "becomingnesses"; and seeing that dirt is proper to a swine, malice to a monkey, poison to a nettle, and folly to a fool, they called a nettle *but* a nettle, and the faults of fools but folly; and never saw the difference between ugliness and beauty absolute, decency, and indecency absolute, glory or shame absolute, and folly or sense absolute.

Whereas, the perception of beauty, and the power of defining physical character, are based on moral instinct, and on the power of defining animal or human character. Nor is it possible to say that one flower is more highly developed, or one animal of a higher order, than another,

* Of Vespertilian science generally, compare *Eagle's Nest* [Vol. XXII. pp. 139, 247].

[1] [See above, ch. iv. § 22, p. 264.]

without the assumption of a divine law of perfection to which the one more conforms than the other.

5. Thus, for instance. That it should ever have been an open question with me whether a poppy had always two of its petals less than the other two, depended wholly on the hurry and imperfection with which the poppy carries out its plan. It never would have occurred to me to doubt whether an iris had three of its leaves smaller than the other three, because an iris always completes itself to its own ideal. Nevertheless, on examining various poppies, as I walked, this summer, up and down the hills between Sheffield and Wakefield,[1] I find the subordination of the upper and lower petals entirely necessary and normal; and that the result of it is to give two distinct profiles to the poppy cup, the difference between which, however, we shall see better in the yellow Welsh poppy, at present called Meconopsis Cambrica, but which, in the Oxford schools, will be "Papaver cruciforme"—"Crosslet Poppy,"—first, because all our botanical names must be in Latin if possible; Greek only allowed when we can do no better; secondly, because meconopsis is barbarous Greek; thirdly, and chiefly, because it is little matter whether this poppy be Welsh or English; but very needful that we should observe, wherever it grows, that the petals are arranged in what used to be, in my young days, called a diamond shape,* as at A, Fig. 10, the two narrow inner ones at right angles to, and projecting farther than, the two outside broad ones; and that the two broad ones, when the flower is seen in profile, as at B, show their margins folded back, as indicated by the thicker lines, and have a profile curve, which is only the softening, or melting away into each other, of two straight lines. Indeed, when the flower is younger, and quite strong, both its profiles, A and B, Fig. 11, are nearly straight-sided; and always, be it young or old, one broader than the other,

* The mathematical term is "rhomb."

[1] [At the beginning of July 1875.]

so as to give the flower, seen from above, the shape of a contracted cross, or crosslet.

6. Now I find no notice of this flower in Gerarde;[1] and in Sowerby, out of eighteen lines of closely printed descriptive text, no notice of its crosslet form, while the petals are only stated to be "roundish, concave,"[2] terms equally applicable to at least one-half of all flower petals in the world. The leaves are *said* to be very deeply pinnately partite; but *drawn*—as neither pinnate nor partite!

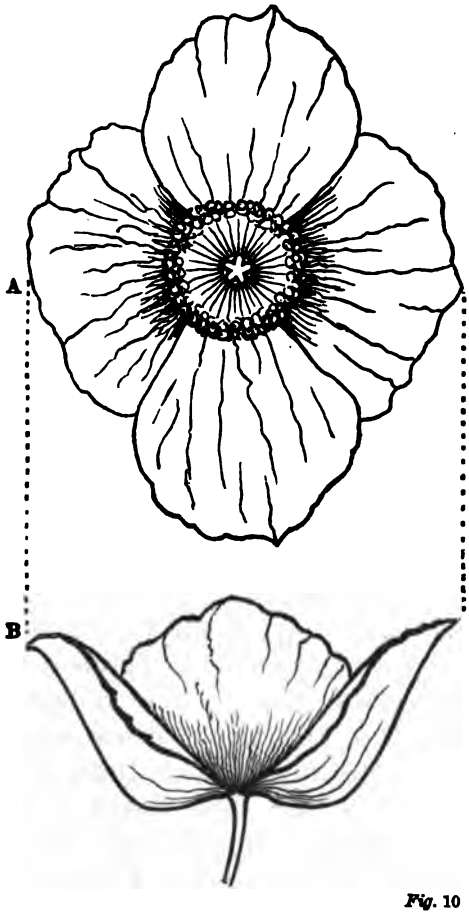


Fig. 10

And this is your modern cheap science, in ten volumes. Now I haven't a quiet moment to spare for drawing this morning; but I merely give the main relations of the petals, A, and blot in the wrinkles of one of the lower ones, B, Fig. 12; and yet in this rude sketch you will feel, I believe, there is something specific which could not belong to any other flower. But all proper description is impossible without careful profiles of each petal laterally and across it. Which I may not find time to draw for any poppy whatever, because they none of them have well-becomingness

[1] [*The Herball or Generall Historie of Plantes.* Gathered by John Gerarde, of London, Master in Chirurgerie. Imprinted at London by John Norton, 1597.]
[2] [Vol. i. p. 94, and Plate 63. The third edition, 1863, is in *twelve* volumes.]

enough to make it worth my while, being all more or less weedy, and ungracious, and mingled of good and evil. Whereupon rises before me, ghostly and untenable, the general question, "What is a weed?" and, impatient for answer, the particular question, "What is a poppy?" I choose, for instance, to call this yellow flower a poppy, instead of a "likeness to poppy," which the botanists meant to call it, in their bad Greek. I choose also to call a poppy, what the botanists have called "glaucous thing" (glaucium). But where and when shall I stop calling things poppies? This is certainly a question to be settled at once, with others appertaining to it.

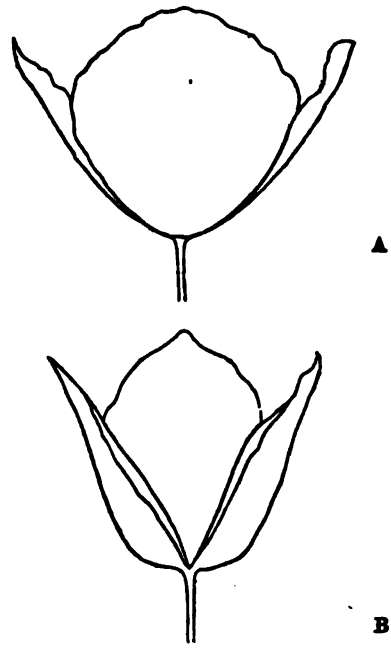


Fig. 11

7. In the first place, then, I mean to call every flower either one thing or another, and not an "aceous" thing, only half something or half another. I mean to call this plant now in my hand, either a poppy or not a poppy; but not poppaceous. And this other, either a thistle or not a thistle; but not thistlaceous. And this other, either a nettle or not a nettle; but not nettlaceous. I know it will be very difficult to carry out this principle when tribes of plants are much extended and varied in type: I shall persist in it, however, as far as possible; and when plants change so much that one cannot with any conscience call them by their family name any more, I shall put them aside somewhere among families of poor relations, not to be minded for the present, until we are well acquainted with the better bred circles. I don't know, for instance, whether I shall call the Burnet "Grass-rose," or put it out

of court for having no petals; but it certainly shall not be called rosaceous; and my first point will be to make sure of my pupils having a clear idea of the central and unquestionable forms of thistle, grass, or rose, and assigning to them pure Latin, and pretty English, names,—classical, if possible; and at least intelligible and decorous.

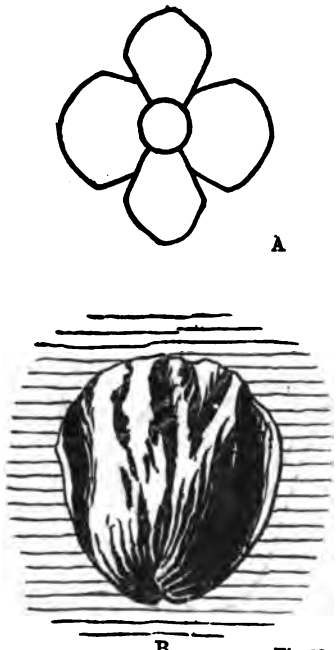


*Fig.* 12

8. I return to our present special question, then, What is a poppy? and return also to a book I gave away long ago, and have just begged back again, Dr. Lindley's *Ladies' Botany*.[1] For without at all looking upon ladies as inferior beings, I dimly hope that what Dr. Lindley considers likely to be intelligible to *them*, may be also clear to their very humble servant.

The poppies, I find (page 19, vol. i.), differ from crowfeet in being of a stupefying instead of a burning nature, and in generally having two sepals and twice two petals; "but as some poppies have three sepals, and twice three petals, the number of these parts is not sufficiently constant to form an essential mark." Yes, I know that, for I found a superb six-petaled poppy, spotted like a cistus, the other day in a friend's garden. But then, what makes it a poppy still? That it is of a stupefying nature, and itself so stupid that it does not know how many petals it should have, is surely not enough distinction?

9. Returning to Lindley, and working the matter farther out with his help, I think this definition might stand. "A poppy is a flower which has either four or six petals, and two or more treasuries, united into one; containing a milky,

[1] [*Ladies' Botany; or, A Familiar Introduction to the Study of the Natural System of Botany*, 1834.]

stupefying fluid in its stalks and leaves, and always throwing away its calyx when it blossoms."

And indeed, every flower which unites all these characters, we shall, in the Oxford schools, call "poppy," and "Papaver"; but when I get fairly into work, I hope to fix my definitions into more strict terms. For I wish all my pupils to form the habit of asking, of every plant, these following four questions, in order, corresponding to the subject of these opening chapters, namely, "What root has it? what leaf? what flower? and what stem?"[1] And, in this definition of poppies, nothing whatever is said about the root; and not only I don't know myself what a poppy root is like, but in all Sowerby's poppy section, I find no word whatever about that matter.

10. Leaving, however, for the present, the root unthought of, and contenting myself with Dr. Lindley's characteristics, I shall place, at the head of the whole group, our common European wild poppy, Papaver Rhoeas, and, with this, arrange the nine following other flowers thus,—opposite.

| NAME IN OXFORD CATALOGUE.[2] | DIOSCORIDES.[3] | IN PRESENT BOTANY. |
|---|---|---|
| 1. Papaver Rhoeas . . | μήκων ῥοιάς . | Papaver Rhoeas |
| 2. P. Hortense . . | μ. κηπευτή * . | P. Hortense |
| 3. P. Elatum . . . | μ. θυλακῖτις † | P. Lamottei |
| 4. P. Argemone . . | . . . . | P. Argemone |
| 5. P. Echinosum . . | . . . . | P. Hybridum |
| 6. P. Violaceum . . | . . . . | Roemeria Hybrida |
| 7. P. Cruciforme . . | . . . . | Meconopsis Cambrica |
| 8. P. Corniculatum . . | μ. κερατῖτις . | Glaucium Corniculatum |
| 9. P. Littorale . . | μ. παράλιος . | Glaucium Luteum |
| 10. P. Chelidonium . . | . . . . | Chelidonium Majus |

* ἧς τὸ σπέρμα ἀρτοποιεῖται ["of which the seed is made into bread"].

† ἐπίμηκες ἔχουσα τὸ κεφάλιον ["with long (or oblong) head"]. Dioscorides makes no effort to distinguish species, but gives the different names as if merely used in different places.

[1] [See chapters ii. ("The Root"), iii. ("The Leaf"), iv. ("The Flower"), and viii. ("The Stem").]

[2] [That is, Ruskin's proposed system of botanical nomenclature, as explained in his Introduction, § 6 (above, p. 202).]

[3] [Greek medical writer: about 100 A.D.]

I must be content at present with determining the Latin names for the Oxford schools; the English ones I shall give as they chance to occur to me, in Gerarde and the classical poets who wrote before the English revolution. When no satisfactory name is to be found, I must try to invent one; as, for instance, just now, I don't like Gerarde's "Corn-rose" for Papaver Rhoeas,[1] and must coin another; but this can't be done by thinking; it will come into my head some day, by chance. I might try at it straightforwardly for a week together, and not do it.

The Latin names must be fixed at once, somehow; and therefore I do the best I can, keeping as much respect for the old nomenclature as possible, though this involves the illogical practice of giving the epithet sometimes from the flower (violaceum, cruciforme), and sometimes from the seed vessel (elatum, echinosum, corniculatum). Guarding this distinction, however, we may perhaps be content to call the six last of the group in English, Urchin Poppy, Violet Poppy, Crosslet Poppy, Horned Poppy, Beach Poppy, and Welcome Poppy. I don't think the last flower pretty enough to be connected more directly with the swallow, in its English name.

11. I shall be well content if my pupils know these ten poppies rightly; all of them at present wild in our own country, and, I believe, also European in range: the head and type of all being the common wild poppy of our cornfields for which the name "Papaver Rhoeas," given it by Dioscorides, Gerarde, and Linnæus, is entirely authoritative, and we will therefore at once examine the meaning, and reason, of that name.

12. Dioscorides[2] says the name belongs to it "*διὰ τὸ ταχέως τὸ ἄνθος ἀποβάλλειν*," "because it casts off its bloom

[1] [*The Herball*, 1597, vol. i. p. 299; compare § 16, p. 279.]

[2] [See, for the quotations here and in the preceding table, book iv. of his works, pp. 240, 241 of the Basle edition of 1529.]

quickly," from ῥέω (rheo), in the sense of shedding.* And this indeed it does,—first calyx, then corolla;—you may translate it "swiftly ruinous" poppy, but notice, in connection with this idea, how it droops its head *before* blooming; an action which, I doubt not, mingled in Homer's thought with the image of its depression when filled by rain, in the passage of the *Iliad*, which, as I have relieved your memory of three unnecessary names of poppy families, you have memory to spare for learning.

"μήκων δ' ὡς ἐτέρωσε κάρη βάλεν, ἥ τ' ἐνὶ κήπῳ
καρπῷ βριθομένη νοτίῃσί τε εἰαρινῇσιν·
ὡς ἐτέρωσ' ἤμυσε κάρη πήληκι βαρυνθέν."

"And as a poppy lets its head fall aside, which in a garden is loaded with its fruit, and with the soft rains of spring, so the youth drooped his head on one side; burdened with the helmet."[1]

And now you shall compare the translations of this passage, with its context, by Chapman and Pope[2]—(or the school of Pope[3]), the one being by a man of pure English temper, and able therefore to understand pure Greek temper; the other infected with all the faults of the falsely classical school of the Renaissance.

First I take Chapman:—

"His shaft smit fair Gorgythion, of Priam's princely race,
Who in Æpina was brought forth, a famous town in Thrace,
By Castianeira, that for form was like celestial breed.
And as a crimson poppy-flower, surcharged with his seed,
And vernal humours falling thick, declines his heavy brow,
So, a-oneside, his helmet's weight his fainting head did bow."

* It is also used sometimes of the garden poppy, says Dioscorides, "διὰ τὸ ῥεῖν ἐξ αὐτῆς τὸν ὀπόν"—"because the sap, opium, flows from it."

[1] [*Iliad*, viii. 306–308.]

[2] [For a similar comparison between Chapman's version of Homer and Pope's, see (in a later volume of this edition) *The Storm-Cloud of the Nineteenth Century*, § 55. On Chapman's, see *Elements of Drawing*, § 258 (Vol. XXV. p. 226); on Pope's, *Modern Painters*, vol. iii. (Vol. V. p. 207), and *Eagle's Nest*, § 74 (Vol. XXII. p. 176).]

[3] [For the literary assistance employed by Pope in preparing his translation, see W. J. Courthope's *Life of Pope*, 1889, pp. 153, 154, 156.]

Next, Pope:—

> "He missed the mark; but pierced Gorgythio's heart,
> And drenched in royal blood the thirsty dart:
> (Fair Castianeira, nymph of form divine,
> This offspring added to King Priam's line).
> As full-blown poppies, overcharged with rain,
> Decline the head, and drooping kiss the plain,
> So sinks the youth: his beauteous head, depressed
> Beneath his helmet, drops upon his breast."

18. I give you the two passages in full, trusting that you may so feel the becomingness of the one, and the gracelessness of the other. But note farther, in the Homeric passage, one subtlety which cannot enough be marked even in Chapman's English, that his second word ἤμυσε, is employed by him both of the stooping of ears of corn, under wind, and of Troy stooping to its ruin;* and otherwise, in good Greek writers, the word is marked as having such specific sense of men's drooping under weight, or towards death, under the burden of fortune which they have no more strength to sustain;† compare the passage I quoted

* See all the passages quoted by Liddell.

† I find this chapter rather tiresome on re-reading it myself, and cancel some farther criticism of the imitation of this passage by Virgil, one of the few pieces of the *Æneid* which are purely and vulgarly imitative rendered also false as well as weak by the introducing sentence, "Volvitur Euryalus leto,"[1] after which the simile of the drooping flower is absurd. Of criticism, the chief use of which is to warn all sensible men from such business, the following abstract of Diderot's notes on the passage, given in the *Saturday Review* for April 29, 1871, is worth preserving. (Was the French critic really not aware that Homer *had* written the lines his own way?)

"Diderot illustrates his theory of poetical hieroglyphs by no quotations, but we can show the manner of his minute and sometimes fanciful criticism by repeating his analysis of the passage of Virgil wherein the death of Euryalus is described:—

> 'Pulchrosque per artus
> It cruor, inque humeros cervix collapsa recumbit;
> Purpureus veluti cum flos succisus aratro
> Languescit moriens; lassove papavera collo
> Demisere caput, pluvia cum forte gravantur.'

"The sound of 'It cruor,' according to Diderot, suggests the image of a jet of blood; 'cervix collapsa recumbit,' the fall of a dying man's head

[1] [*Æneid*, ix. 433.]

from Plato (*Crown of Wild Olive*, § 88):[1] "And bore lightly the burden of gold and of possessions." And thus you will begin to understand how the poppy became in the heathen mind the type at once of power, or pride, and of its loss; and therefore, both why Virgil represents the white nymph Nais, "pallentes violas, et summa papavera carpens,"[2] gathering the pale flags, and the highest poppies, —and the reason for the choice of this rather than any other flower, in the story of Tarquin's message to his son.[3]

14. But you are next to remember the word Rhoeas in another sense. Whether originally intended or afterwards caught at, the resemblance of the word to "Rhoea," a pomegranate, mentally connects itself with the resemblance of the poppy head to the pomegranate fruit.

And if I allow this flower to be the first we take up for careful study in *Proserpina*, on account of its simplicity of form and splendour of colour, I wish you also to remember, in connection with it, the cause of Proserpine's

upon his shoulder; 'succisus' imitates the use of a cutting scythe (not plough); 'demisere' is as soft as the eye of a flower; 'gravantur,' on the other hand, has all the weight of a calyx, filled with rain; 'collapsa' marks an effort and a fall, and similar double duty is performed by 'papavera,' the first two syllables symbolizing the poppy upright, the last two the poppy bent. While thus pursuing his minute investigations, Diderot can scarcely help laughing at himself, and candidly owns that he is open to the suspicion of discovering in the poem beauties which have no existence. He therefore qualifies his eulogy by pointing out two faults in the passage. 'Gravantur,' notwithstanding the praise it has received, is a little too heavy for the light head of a poppy, even when filled with water. As for 'aratro,' coming as it does after the hiss of 'succisus,' it is altogether abominable. Had Homer written the lines, he would have ended with some hieroglyph, which would have continued the hiss or described the fall of a flower. To the hiss of 'succisus' Diderot is warmly attached. Not by mistake, but in order to justify the sound, he ventures to translate 'aratrum' into 'scythe,' boldly and rightly declaring in a marginal note that this is not the meaning of the word."

[1] [In this edition Vol. XVIII. p. 457.]

[2] [*Eclogues*, ii. 46, 47. It will be noticed that Ruskin translates "violas" (as ἴα in Greek) "flags," and not "violets": on this subject, see below, p. 406.]

[3] [Livy, i. 54, where the historian tells the story of Sextus sending a messenger to his father, Tarquinius Superbus, to ask what he ought to do to reduce the city of Gabii. The king took the envoy into the garden, and cut down with a stick the tallest poppies.]

eternal captivity—her having tasted a pomegranate seed,[1] —the pomegranate being in Greek mythology what the apple is in the Mosaic legend; and, in the whole worship of Demeter, associated with the poppy[2] by a multitude of ideas which are not definitely expressed, but can only be gathered out of Greek art and literature, as we learn their symbolism. The chief character on which these thoughts are founded is the fulness of seed in the poppy and pomegranate, as an image of life; then the forms of both became adopted for beads or bosses in ornamental art; the pomegranate remains more distinctly a Jewish and Christian type, from its use in the border of Aaron's robe,[3] down to the fruit in the hand of Angelico's and Botticelli's Infant Christs; while the poppy is gradually confused by the Byzantine Greeks with grapes; and both of these with palm fruit. The palm, in the shorthand of their art, gradually becomes a symmetrical branched ornament with two pendent bosses; this is again confused with the Greek iris (Homer's blue iris, and Pindar's water-flag[4])—and the Florentines, in adopting Byzantine ornament, read it into their own Fleur-de-lys;[5] but insert two poppy heads on each side of the entire foil, in their finest heraldry.

15. Meantime the definitely intended poppy, in late Christian Greek art of the twelfth century, modifies the

[1] [See the *Homeric Hymn to Demeter*, 371 *seq.*, where the god of the dead "gave to Persephone sweet pomegranate seed to eat, and this he did that she might not abide for ever beside revered Demeter."]

[2] [From Callimachus, *Hymn to Demeter* (line 44), it is clear that the priestesses of the goddess were decked with poppies, and in statues of her the poppy is frequent. Hers is "the poppy, emblem of an inexhaustible fertility, and full of mysterious juices for the alleviation of pain" (Pater's *Greek Studies*, p. 105). Compare Ovid, *Fasti*, iv. 547.]

[3] [Exodus xxviii. 34: "A golden bell and a pomegranate, a golden bell and a pomegranate, upon the hem of the robe round about." Robert Browning's preface to the last number of his *Bells and Pomegranates* contains allusions to the symbolism of the pomegranate in Rabbinical literature and mediæval art. Mrs. Browning's lines in *Lady Geraldine's Courtship* will also be recalled:—

"Or from Browning some 'Pomegranate,' which, if cut deep
down the middle,
Shows a heart within blood-tinctured, of a veined humanity."]

[4] [See Vol. XXI. p. 112.]

[5] [On this subject compare the "Notes on the Educational Series," Vol. XXI. p. 113.]

form of the Acanthus leaf with its own, until the northern twelfth century workman takes the thistle-head for the poppy, and the thistle-leaf for acanthus. The true poppy-head remains in the south, but gets more and more confused with grapes, till the Renaissance carvers are content with any kind of boss full of seed, but insist on such boss or bursting globe as some essential part of their ornament; —the bean-pod for the same reason (not without Pythagorean notions, and some of republican election)[1] is used by Brunelleschi for main decoration of the lantern of Florence Duomo; and, finally, the ornamentation gets so shapeless that M. Viollet-le-Duc, in his *Dictionary of Ornament*,[2] loses trace of its origin altogether, and fancies the later forms were derived from the spadix of the arum.

16. I have no time to enter into farther details; but through all this vast range of art, note this singular fact, that the wheat-ear, the vine, the fleur-de-lys, the poppy, and the jagged leaf of the acanthus-weed, or thistle, occupy the entire thoughts of the decorative workmen trained in classic schools, to the exclusion of the rose, true lily, and the other flowers of luxury. And that the deeply underlying reason of this is in the relation of weeds to corn, or of the adverse powers of nature to the beneficent ones, expressed for us readers of the Jewish scriptures, centrally in the verse, "thorns also, and thistles, shall it bring forth to thee; and thou shalt eat the herb of the field"[3] (χόρτος, grass or corn), and exquisitely symbolized throughout the fields of Europe by the presence of the purple "corn-flag," or gladiolus, and "corn-rose" (Gerarde's name for Papaver Rhoeas[4]), in the midst of carelessly tended corn; and in the traditions of the art of Europe by the springing of the acanthus round the basket of the canephora, strictly the

[1] [For Pythagorean beans, see Vol. XIX. p. 368 *n*. At Athens, κύαμος (bean) came to mean *the lot* by which public officers were elected.]

[2] [The reference must be either to the *Dictionnaire Raisonné de l'Architecture Française*, 1858, or to the *Dictionnaire Raisonné du Mobilier Français*, 1855–1874.]

[3] [Genesis iii. 18.]

[4] [Compare § 10, p. 274.]

basket *for bread*, the idea of bread including all sacred things carried at the feasts of Demeter, Bacchus, and the Queen of the Air. And this springing of the thorny weeds round the basket of reed, distinctly taken up by the Byzantine Italians in the basket-work capital of the twelfth century (which I have already illustrated at length in the *Stones of Venice*,[1]) becomes the germ of all capitals whatsoever, in the great schools of Gothic, to the end of Gothic time, and also of all the capitals of the pure and

[1] [In vol. ii. ch. v. § 23 (Vol. X. p. 163). On a printed proof, among other matter intended for *St. Mark's Rest*, is the following additional passage on the subject:—

"Now, lastly, of the Thistle, more strictly the Acanthus. The prickliness of its leaf becomes at last its grace, so that of all leaves it is chosen at last for its Gratia by the Masters of working nations, and chosen, according to their tradition, in that Corinth where the Greek wisdom, or sophia, was to have her final obedience rendered to her. And the Corinthian Athena is chosen rather than the Athenian one, because the Corinthian bridles or disciplines the spirit of the fountain of life; she is Athena Χαλινῖτις. Therefore 'after these things, Paul departed from Athens and came to Corinth, and found there of his own nation a labouring man and his wife. And because he was of the same craft, he abode with them, and wrought, for by their occupation they were tentmakers'—makers of the primitive house; that is to say, builders of the free temples of house-law in the desert.

"And in the city, where this submission to the earliest law of life was to be rendered, the chief decoration of all temples to the end of time was designed. And it was designed according to tradition by this chance, that its designer saw the wild weed of the Acanthus growing round a basket for carrying bread; that same basket which the maidens carried in the feast to their Athena, and were thence called canister-bearers or canephore, the basket itself being woven of rushes, reeds.

"Whence in the Greek Byzantine inheritance of art-sculpture the central bell of the capital is of basket-work. And round this basket-work the prickly leaf is set; at first sharp-edged and jagged, but then gradually softened into pure grace, until at last—without even a serration left—it becomes the smoothly-bent petal of the Lombard capital, and finally the one entirely ruling form in the structural ornament of every nobly designed temple built in the ages of Christian faith.

"And now, lastly, the Basket of the Canephore, was, I have just said, woven of rushes or reeds. In such primal ark (scirpeus—of rushes, *not* bulrushes), or Ark of Covenant, the first shepherd of the Jewish people is saved; and thus as the weed of the wide sea is the type of the lawless idleness which in heaven shall root itself no more on the wharf of Lethe, the flag of the river—usefullest, as humblest of all the green things given to the service of man—becomes the type of the obedient shepherd sceptre, which, by the still waters of comfort, redeems the lost, and satisfies the afflicted, soul."

For Athena Chalinitis, of Corinth, see *Queen of the Air*, Lecture i. (Vol. XIX. p. 295); for St. Paul at Corinth, see Acts xviii. 1-3; for the other Bible references, see Exodus ii. 3 (fiscellam scirpeam), and Psalms xxiii. 2 (Prayer-book version: "waters of comfort").]

noble Renaissance architecture of Angelico and Perugino,[1] and all that was learned from them in the north, while the introduction of the rose, as a primal element of decoration, only takes place when the luxury of English decorated Gothic, the result of that licentious spirit in the lords which brought on the Wars of the Roses, indicates the approach of destruction to the feudal, artistic, and moral power of the northern nations.

For which reason, and many others, I must yet delay the following out of our main subject, till I have answered the other question, which brought me to pause in the middle of this chapter, namely, "What is a weed?"[2]

[1] [For the "Revival architecture of exquisite design" shown in Angelico's pictures, see Vol. XXI. p. 201.]

[2] [See above, § 6, p. 271.]

## CHAPTER VI

### THE PARABLE OF JOASH[1]

1. SOME ten or twelve years ago, I bought—three times twelve are thirty-six—of a delightful little book by Mrs. Gatty, called *Aunt Judy's Tales*[2]—whereof to make presents to my little lady friends. I had, at that happy time, perhaps from four-and-twenty to six-and-thirty—I forget exactly how many—very particular little lady friends; and greatly wished Aunt Judy to be the thirty-seventh,—the kindest, wittiest, prettiest girl one had ever read of, at least in so entirely proper and orthodox literature.

2. Not but that it is a suspicious sign of infirmity of faith in our modern moralists to make their exemplary young people always pretty; and dress them always in the height of the fashion. One may read Miss Edgeworth's *Harry and Lucy*, *Frank and Mary*, *Fashionable Tales*, or *Parents' Assistant*, through, from end to end, with extremest care; and never find out whether Lucy was tall or short, nor whether Mary was dark or fair, nor how Miss Annaly was dressed, nor—which was my own chief point of interest—what was the colour of Rosamond's eyes.[3] Whereas Aunt Judy, in charming position after position, is shown to have expressed all her pure evangelical principles with the prettiest of lips; and to have had her gown, though puritanically plain, made by one of the best modistes in London.

[1] [For this title, see below, § 11, p. 288.]

[2] [*Aunt Judy's Tales*, by Mrs. Alfred Gatty, illustrated by Miss Clara S. Lane, 1859. See p. 37, where a weed is defined as "a vegetable out of its place."]

[3] [For Miss Annaly, see *Ormond*, a story which Ruskin particularly commends (see *Fors Clavigera*, Letter 87, § 2); for another reference to the story of Rosamond in "The Purple Jar," see Vol. XVIII. p. 299. For Ruskin's early reading of Miss Edgeworth's Tales, see Vol. XV. p. 227.]

8. Nevertheless, the book is wholesome and useful; and the nicest story in it, as far as I recollect, is an inquiry into the subject which is our present business, "What is a weed?"—in which, by many pleasant devices, Aunt Judy leads her little brothers and sisters to discern that a weed is "a plant in the wrong place."

"Vegetable" in the wrong place, by the way, I think Aunt Judy says, being a precisely scientific little aunt. But I can't keep it out of my own less scientific head that "vegetable" means only something going to be boiled. I like "plant" better for general sense, besides that it's shorter.

Whatever we call them, Aunt Judy is perfectly right about them as far as she has gone; but, as happens often even to the best of evangelical instructresses, she has stopped just short of the gist of the whole matter. It is entirely true that a weed is a plant that has got into a wrong place; but it never seems to have occurred to Aunt Judy that some plants never *do!*

Who ever saw a wood anemone or a heath blossom in the wrong place? Who ever saw nettle or hemlock in a right one? And yet, the difference between flower and weed (I use, for convenience' sake, these words in their familiar opposition) certainly does not consist merely in the flowers being innocent, and the weed stinging and venomous. We do not call the nightshade a weed in our hedges, nor the scarlet agaric in our woods. But we do the corn-cockle in our fields.

4. Had the thoughtful little tutress gone but one thought farther, and instead of "a vegetable in a wrong place" (which it may happen to the innocentest vegetable sometimes to be, without turning into a weed, therefore), said, "A vegetable which has an innate disposition to *get* into the wrong place," she would have greatly furthered the matter for us; but then she perhaps would have felt herself to be uncharitably dividing with vegetables her own little evangelical property of original sin.

5. This, you will find, nevertheless, to be the very essence of weed character—in plants, as in men. If you glance through your botanical books, you will see often added after certain names—"a troublesome weed." It is not its being venomous, or ugly, but its being impertinent—thrusting itself where it has no business, and hinders other people's business—that makes a weed of it.[1] The most accursed of all vegetables, the one that has destroyed for the present even the possibility of European civilization,[2] is only called a weed in the slang of its votaries;* but in the finest and truest English we call so the plant which has come to us by chance from the same country, the type of mere senseless prolific activity, the American water-plant, choking our streams till the very fish that leap out of them cannot fall back, but die on the clogged surface; and indeed, for this unrestrainable, unconquerable insolence of uselessness, what name can be enough dishonourable?

6. I pass to vegetation of nobler rank.

You remember, I was obliged in the last chapter to leave my poppy, for the present, without an English specific name, because I don't like Gerarde's "Corn-rose,"[3] and can't yet think of another. Nevertheless, I would have used Gerarde's name, if the corn-rose were as much a rose as the corn-flag is a flag. But it isn't. The rose and lily have quite different relations to the corn. The lily is grass in loveliness, as the corn is grass in use; and both grow together in peace—gladiolus in the wheat, and narcissus in the pasture. But the rose is of another and higher order than the corn, and you never saw a corn-field overrun with sweetbriar or apple-blossom.

They have no mind, they, to get into the wrong place.

* And I have too harshly called our English vines, "wicked weeds of Kent," in *Fors Clavigera*, Letter 27, § 10. Much may be said for Ale, when we brew it for our people honestly.

[1] [Compare vol. ii. ch. i. § 17 (below, p. 396).]
[2] [Compare above, pp. 127, 227.]
[3] [See above, pp. 274, 279 (§§ 10, 16).]

What is it, then, this temper in some plants—malicious as it seems—intrusive, at all events, or erring,—which brings them out of their places—thrusts them where they thwart us and offend?

7. Primarily, it is mere hardihood and coarseness of make. A plant that can live anywhere, will often live where it is not wanted. But the delicate and tender ones keep at home. You have no trouble in "keeping down" the spring gentian. It rejoices in its own Alpine home, and makes the earth as like heaven as it can,[1] but yields as softly as the air, if you want it to give place. Here in England, it will only grow on the loneliest moors, above the High Force of Tees; its Latin name, for *us* (I may as well tell you at once) is to be "Lucia verna"; and its English one, Lucy of Teesdale.[2]

8. But a plant may be hardy, and coarse of make, and able to live anywhere, and yet be no weed. The coltsfoot so far as I know, is the first of large-leaved plants to grow afresh on ground that has been disturbed: fall of Alpine débris, run of railroad embankment, waste of drifted slime by flood, it seeks to heal and redeem; but it does not offend us in our gardens, nor impoverish us in our fields.

Nevertheless, mere coarseness of structure, indiscriminate hardihood, is at least a point of some unworthiness in a plant. That it should have no choice of home, no love of native land, is ungentle; much more if such discrimination as it has, be immodest, and incline it, seemingly, to open and much-traversed places, where it may be continually seen of strangers. The tormentilla[3] gleams in showers along the mountain turf; her delicate crosslets are separate, though constellate, as the rubied daisy. But the king-cup—(blessing

[1] [For other passages on the gentian, see Vol. VI. p. 422; Vol. XII. p. 501; Vol. XIII. p. 117; Vol. XV. pp. 418, 425, 464; and Vol. XX. p. 166.]

[2] [See ch. xi. § 25 (below, p. 352); and compare *Laws of Fésole*, Vol. XV. p. 425. For the rich flora of Upper Teesdale, see *North Yorkshire: Studies of its Botany, Geology, Climate, and Physical Geography*, by John Gilbert Baker, 1863. In thus naming the moorland gentian Ruskin was thinking, no doubt, of Wordsworth's "Lucy Gray," who "dwelt upon a wide moor," and who, as "some maintain," may still be seen "Upon the lonesome wild."]

[3] [Compare *Laws of Fésole*, ch. vi. § 4 (Vol. XV. p. 397), and Vol. XXI. p. 112.]

be upon it always no less)—crowds itself sometimes into too burnished flame of inevitable gold. I don't know if there was anything in the darkness of this last spring to make it brighter in resistance; but I never saw any spaces of full warm yellow, in natural colour, so intense as the meadows between Reading and the Thames; nor did I know perfectly what purple and gold meant, till I saw a field of park land embroidered a foot deep with king-cup and clover—while I was correcting my last notes on the spring colours of the Royal Academy—at Aylesbury.[1]

9. And there are two other questions of extreme subtlety connected with this main one. What shall we say of the plants whose entire destiny is parasitic—which are not only sometimes, and *im*pertinently, but always, and pertinently, out of place; not only out of the right place, but out of any place of their own? When is mistletoe, for instance, in the right place, young ladies, think you? On an apple tree, or on a ceiling? When is ivy in the right place?—when wallflower? The ivy has been torn down from the towers of Kenilworth; the weeds from the arches of the Coliseum, and from the steps of the Araceli,[2]—irreverently, vilely, and in vain; but how are we to separate the creatures whose office it is to abate the grief of ruin by their gentleness,

> "wafting wallflower scents
> From out the crumbling ruins of fallen pride,
> And chambers of transgression, now forlorn,"[3]

from those which truly resist the toil of men, and conspire against their fame; which are cunning to consume, and prolific to encumber;[4] and of whose perverse and unwelcome

[1] [See Vol. XIV. p. 458.]

[2] [The flight of 124 marble steps leading to the church of S. Maria in Ara Cœli, on the Capitoline hill. For the flowers which once grew on the Coliseum, see Vol. I. p. 457 *n.*]

[3] [Wordsworth: *Excursion*, book iv., ll. 1047–1049.]

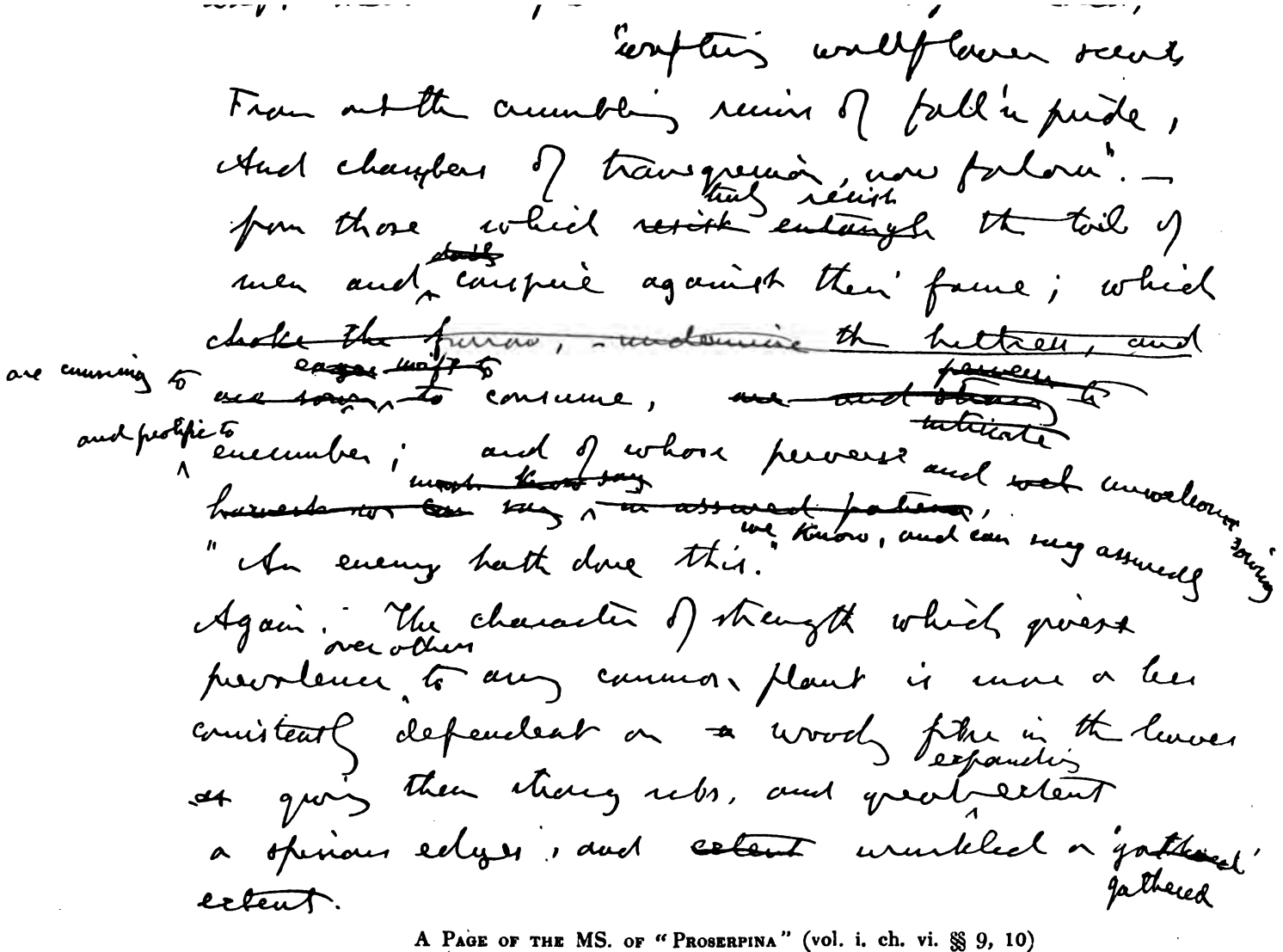
[4] [The MS. shows the same careful revision here as has been illustrated in earlier volumes. Ruskin first wrote: ". . . from those which entangle the toil of men, and conspire against their fame; which choke the furrow, undermine the buttress, and are sown to consume and strong to encumber." "Strong" was altered to "perverse" and to "intricate" before the final word was found.]

Jotham 4 B

And there are two other questions – of extreme subtlety connected with this main one. ~~There are some~~ many ~~What are we to say of~~

What shall we say of the plants, whose entire destiny is parasitic – which are not only sometimes, and so impertinently, – but always – and pertinently – out of place; not only out of the right place, but out of any place – of their own

When Is mistletoe ~~in the~~ for instance – in the right place – young ladies, think you? – On an apple tree, – on a ceiling? When is ivy in the right place, – when ~~a~~ wall flower? – The ivy has been torn down from the towers of Kenilworth; – the weeds from the arches of the Coliseum, and from the steps of the Aracoeli, – ~~both~~ – irreverently – vilely, and in vain; – but how are we to separate the creatures whose office it is ~~[illegible]~~



"wafting wallflower scents
From out the crumbling ruins of fall'n pride,
And chambers of transgression, now forlorn". —
from those which ~~resist~~ truly resist ~~entangle~~ the toil of
men and ~~daily~~ conspire against their fame; which
~~choke the furrow, undermine the hittress, and~~
are cunning to ~~are sown~~ ~~eager~~ ~~swift to~~ to consume, ~~are and strong to~~ ~~perverse to~~ ~~intricate~~
and prolific to encumber; and of whose perverse and ~~wel~~ unwelcome sowing
~~harvests we can say~~ ~~must know say~~ ~~in assured patience~~,
we know, and can say assuredly
"An enemy hath done this."
Again. The character of strength which gives
prevalence over others to any common plant is more or less
consistently dependent on ~~a~~ woody fibre in the leaves
~~as~~ giving them strong ribs, and great expanding extent
or spinous edges; and ~~extent~~ wrinkled or 'gathered'
extent.

A PAGE OF THE MS. OF "PROSERPINA" (vol. i. ch. vi. §§ 9, 10)

pp. 286–287

sowing we know, and can say assuredly, "An enemy hath done this."[1]

10. Again. The character of strength which gives prevalence over others to any common plant, is more or less consistently dependent on woody fibre in the leaves; giving them strong ribs and great expanding extent; or spinous edges, and wrinkled or gathered extent.

Get clearly into your mind the nature of these two conditions. When a leaf is to be spread wide, like the Burdock, it is supported by a framework of extending ribs like a Gothic roof. The supporting function of these is geometrical; every one is constructed like the girders of a bridge, or beams of a floor, with all manner of science in the distribution of their substance in the section, for narrow and deep strength; and the shafts are mostly hollow. But when the extending space of a leaf is to be enriched with fulness of folds, and become beautiful in wrinkles, this may be done either by pure undulation as of a liquid current along the leaf edge, or by sharp "drawing"—or "gathering" I believe ladies would call it[2]—and stitching of the edges together. And this stitching together, if to be done very strongly, is done round a bit of stick, as a sail is reefed round a mast; and this bit of stick needs to be compactly, not geometrically strong; its function is essentially that of starch,—not to hold the leaf up off the ground against gravity; but to stick the edges out, stiffly, in a crimped frill. And in beautiful work of this kind, which we are meant to study, the stays of the leaf—or stay-bones—are finished off very sharply and exquisitely at the points; and indeed so much so, that they prick our fingers when we touch them; for they are not at all meant to be touched, but admired.

11. To be admired,—with qualification, indeed, always, but with extreme respect for their endurance and orderliness. Among flowers that pass away, and leaves that shake

[1] [Matthew xiii. 38.]
[2] [See below, § 13, p. 288.]

as with ague, or shrink like bad cloth,—these, in their sturdy growth and enduring life, we are bound to honour; and, under the green holly, remember how much softer friendship was failing, and how much of other loving, folly.[1] And yet,—you are not to confuse the thistle with the cedar that is in Lebanon; nor to forget—if the spinous nature of it become too cruel to provoke and offend—the parable of Joash to Amaziah, and its fulfilment: "There passed by a wild beast that was in Lebanon, and trode down the thistle."[2]

12. Then, lastly, if this rudeness and insensitiveness of nature be gifted with no redeeming beauty; if the boss of the thistle lose its purple, and the star of the Lion's tooth, its light; and, much more, if service be perverted as beauty is lost, and the honied tube, and medicinal leaf, change into mere swollen emptiness, and salt brown membrane, swayed in nerveless languor by the idle sea,—at last the separation between the two natures is as great as between the fruitful earth and fruitless ocean; and between the living hands that tend the Garden of Herbs where Love is,[3] and those unclasped, that toss with tangle and with shells.[4]

. . . . . .

18. I had a long bit in my head, that I wanted to write, about St. George of the Seaweed,[5] but I've no time to do it; and those few words of Tennyson's are enough, if one thinks of them: only I see, in correcting press, that I've partly misapplied the idea of "gathering" in the leaf

[1] [*As You Like It*, Act ii. sc. 7:—

"Heigh-ho! sing, heigh-ho! unto the green holly:
Most friendship is feigning, most loving mere folly."]

[2] [2 Kings xiv. 9–14.]

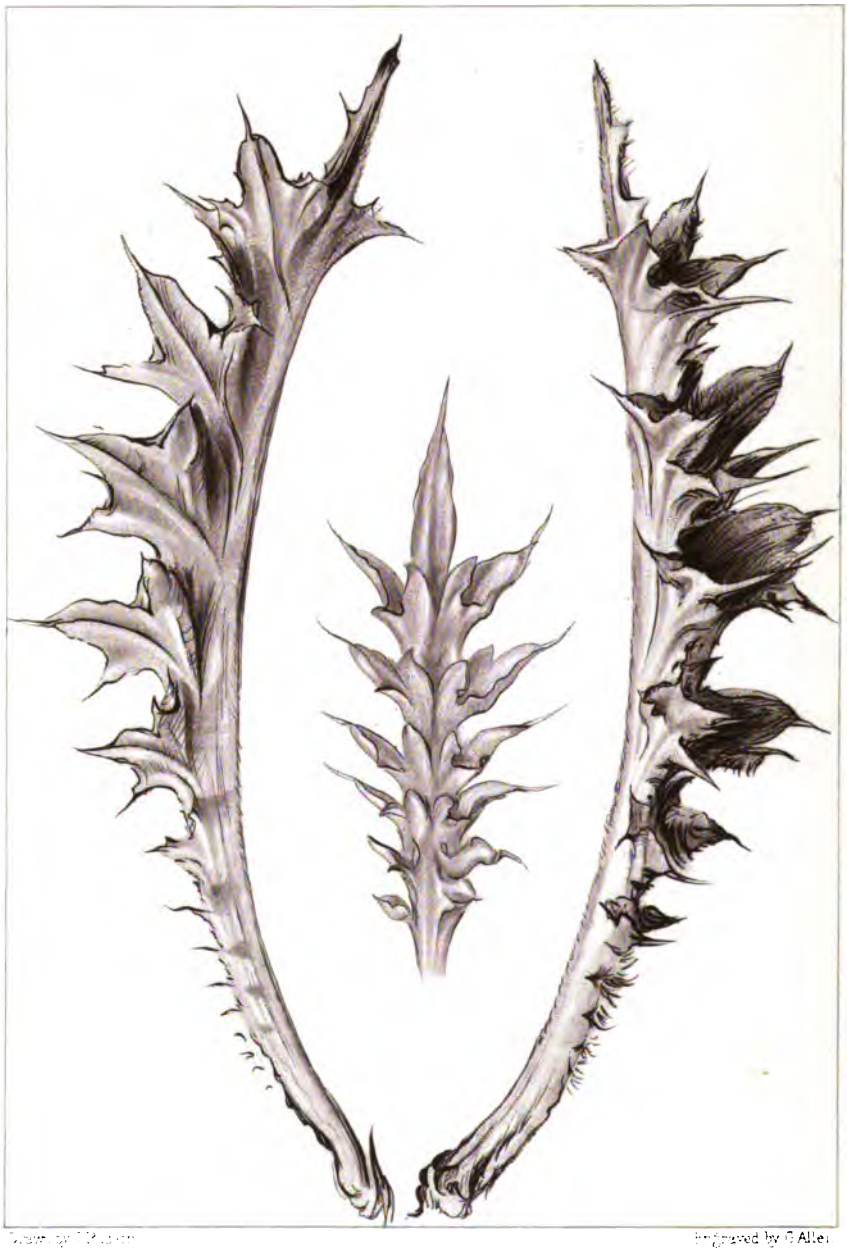
[3] [Proverbs xv. 17.]

[4] [*In Memoriam*, x.:—

"And hands so often clasp'd in mine,
Should toss with tangle and with shells."]

[5] [A favourite spot with Ruskin: see Vol. X. p. 4, and Vol. XXIV. p. xliii.]

ACANTHOID LEAVES



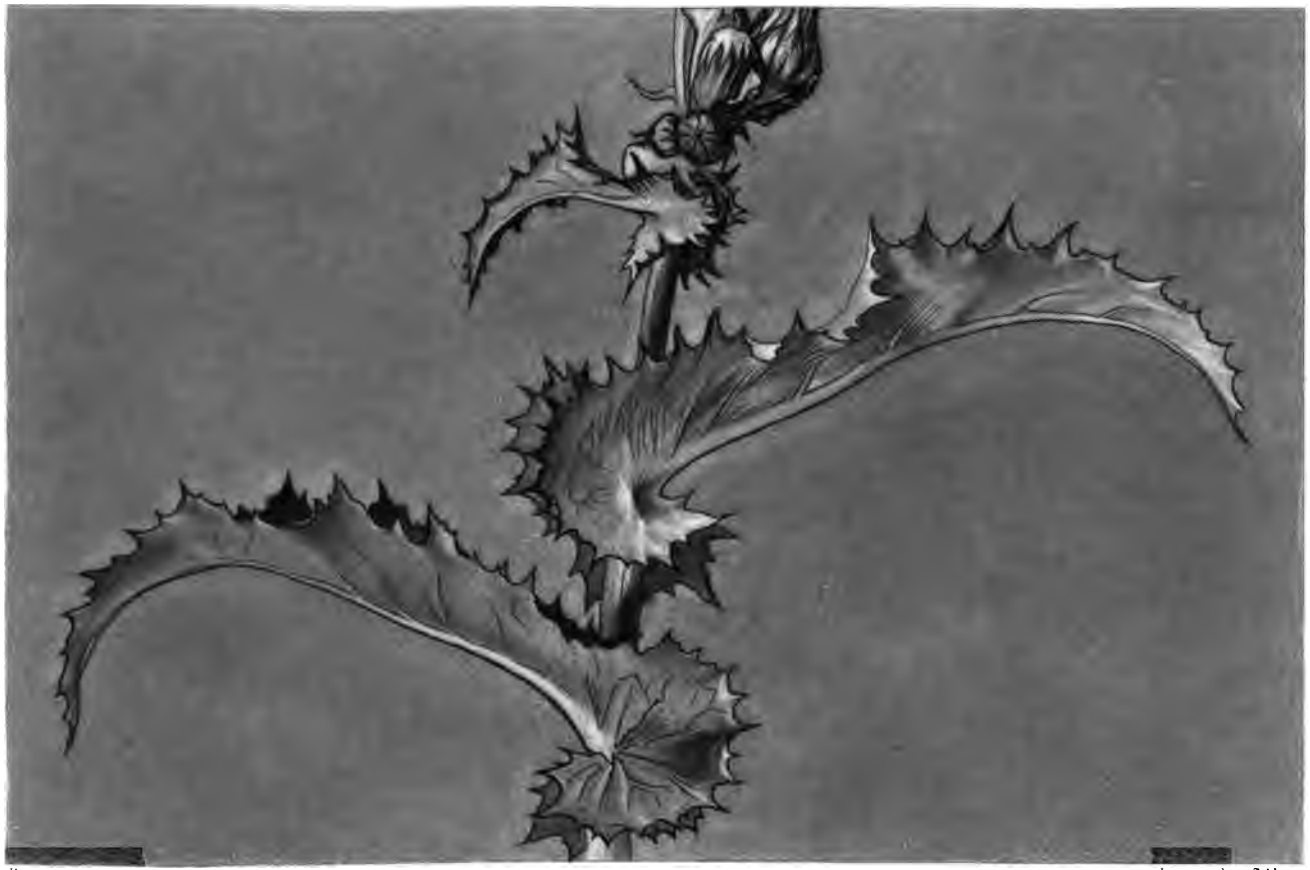
Engraved by T. Allen

ACANTHOID LEAVES

subject, adequately enough rendered by perfectly simple means. Here I had only a succulent and membranous surface to represent, with definite outlines, and merely undulating folds; and this is sufficiently done by a careful and firm pen outline on grey paper, with a slight wash of colour afterwards, reinforced in the darks; then marking the lights with white. This method is classic and authoritative, being used by many of the greatest masters (by Holbein continually); and it is much the best which the general student can adopt for expression of the action and muscular power of plants.

The goodness or badness of such work depends absolutely on the truth of the single line. You will find a thousand botanical drawings which will give you a delicate and deceptive resemblance of the leaf, for one that will give you the right convexity in its backbone, the right perspective of its peaks when they foreshorten, or the right relation of depth in the shading of its dimples. On which, in leaves as in faces, no little expression of temper depends.

Meantime we have yet to consider somewhat more touching that temper itself, in next chapter.



Crested Leaves
LETTUCE-THISTLE

UNIV. OF
CALIFORNIA

## CHAPTER VII

### THE PARABLE OF JOTHAM

1. I DO not know if my readers were checked, as I wished them to be, at least for a moment, in the close of the last chapter, by my talking of thistles and dandelions changing into seaweed, by gradation of which, doubtless, Mr. Darwin can furnish us with specious and sufficient instances. But the two groups will not be contemplated in our Oxford system as in any parental relations whatsoever.

We shall, however, find some very notable relations existing between the two groups of the wild flowers of dry land, which represent, in the widest extent, and the distinctest opposition, the two characters of material serviceableness and unserviceableness; the groups which in our English classification will be easily remembered as those of the Thyme, and the Daisy.

The one, scented as with incense—medicinal—and in all gentle and humble ways, useful. The other, scentless—helpless for ministry to the body; infinitely dear as the bringer of light, ruby, white and gold; the three colours of the Day, with no hue of shade in it. Therefore I take it on the coins of St. George[1] for the symbol of the splendour or light of heaven, which is dearest where humblest.

2. Now these great two orders—of which the types are the thyme and the daisy—you are to remember generally as the "Herbs" and the "Sunflowers." You are not to call them Lipped flowers, nor Composed flowers; because the first is a vulgar term; for when you once come to be able to draw a lip, or, in noble duty, to kiss one, you will know that no other flower in earth is like that: and the second is an indefinite term; for a foxglove is as much a

[1] [The daisy was to be on the reverse of St. George's pennies: see *Fors Clavigera*, Letter 58.]

"composed" flower as a daisy; but it is composed in the shape of a spire, instead of the shape of the sun. And again a thistle, which common botany calls a composed flower, as well as a daisy, is composed in quite another shape, being, on the whole, bossy instead of flat; and of another temper, or composition of mind, also, being connected in that respect with butterburs, and a vast company of rough, knotty, half-black or brown, and generally unluminous—flowers I can scarcely call them—and weeds I will not,—creatures, at all events, in nowise to be gathered under the general name "Composed," with the stars that crown Chaucer's Alcestis, when she returns to the day from the dead.[1]

But the wilder and stronger blossoms of the Hawk's-eye—again you see I refuse for them the word weed;—and the waste-loving Chicory, which the Venetians call "Sponsa solis," are all to be held in one class with the Sunflowers; but dedicate,—the daisy to Alcestis alone; others to Clytia, or the Physician Apollo himself: but I can't follow their mythology yet awhile.[2]

8. Now in these two families you have typically Use opposed to Beauty in *wildness*;[3] it is their wildness which is their virtue;—that the thyme is sweet where it is unthought of, and the daisies red, where the foot despises them:[4] while, in other orders, wildness is their crime,—"Wherefore, when I looked that it should bring forth grapes, brought it forth wild grapes?"[5] But in all of them you must distinguish between the pure wildness of flowers and their distress. It may not be our duty to tame them; but it must be, to relieve.

[1] [See the Prologue to the *Legende of Goode Women*:—

"A fret of golde she hadde next her heer,
And upon that a white coroune she beer,
With flourouns small, and, I shal nat lye,
For al the world right as a daysye
Ycorouned ys with white leves lyte . . ."]

[2] [See below, ch. xi. p. 353.]

[3] [On this subject, see below, p. 532.]

[4] [Compare Ruskin's quotation of the line from *Maud* in *Sesame and Lilies*, § 93 (Vol. XVIII. p. 141).]

[5] [Isaiah v. 4.]

4. It chanced, as I was arranging the course of these two chapters, that I had examples given me of distressed and happy wildness, in immediate contrast. The first, I grieve to say, was in a bit of my own brushwood, left uncared for evidently many a year before it became mine. I had to cut my way into it through a mass of thorny ruin; black, bird's-nest like, entanglement of brittle spray round twisted stems of ill-grown birches strangling each other, and changing half into roots among the rock clefts; knotted stumps of never-blossoming blackthorn, and choked stragglings of holly, all laced and twisted and tethered round with an untouchable, almost unhewable, thatch, a foot thick, of dead bramble and rose, laid over rotten ground through which the water soaked ceaselessly, undermining it into merely unctuous clods and clots, knitted together by mossy sponge. It was all Nature's *free* doing! she had had her way with it to the uttermost; and clearly needed human help and interference in her business; and yet there was not one plant in the whole ruinous and deathful riot of the place, whose nature was not in itself wholesome and lovely; but all lost for want of discipline.

5. The other piece of wild growth was among the fallen blocks of limestone under Malham Cove.[1] Sheltered by the cliff above from stress of wind, the ash and hazel wood spring there in a fair and perfect freedom, without a diseased bough, or an unwholesome shade. I do not know why mine is all encumbered with overgrowth, and this so lovely that scarce a branch could be gathered but with injury;—while underneath, the oxalis, and the two smallest geraniums (Lucidum and Herb-Robert)[2] and the mossy saxifrage, and the cross-leaved bed-straw, and the white pansy, wrought themselves into wreaths among the fallen crags, in which every leaf rejoiced, and was at rest.

[1] [For Ruskin's studies of leafage at Malham Cove in 1875, see Vol. XXI. p. 145; *Fors Clavigera*, Letter 58; and Vol. XXIV. p. xxix.]

[2] [See Plate XIV., which was prepared for *Proserpina*, but has not hitherto been published.]

6. Now between these two states of equally natural growth, the point of difference that forced itself on me (and practically enough, in the work I had in my own wood), was not so much the withering and waste of the one, and the life of the other, as the thorniness and cruelty of the one, and the softness of the other. In Malham Cove, the stones of the brook were softer with moss than any silken pillow—the crowded oxalis leaves yielded to the pressure of the hand, and were not felt—the cloven leaves of the Herb-Robert[1] and orbed clusters of its companion overflowed every rent in the rude crags with living balm; there was scarcely a place left by the tenderness of the happy things, where one might not lay down one's forehead on their warm softness, and sleep. But in the waste and distressed ground, the distress had changed itself to cruelty. The leaves had all perished, and the bending saplings, and the wood of trust;—but the thorns were there, immortal, and the gnarled and sapless roots, and the dusty treacheries of decay.

7. Of which things you will find it good to consider also otherwise than botanically. For all these lower organisms suffer and perish, or are gladdened and flourish, under conditions which are in utter precision symbolical, and in utter fidelity representative, of the conditions which induce adversity and prosperity in the kingdoms of men: and the Eternal Demeter,—Mother, and Judge,[2]—brings forth, as the herb yielding seed,[3] so also the thorn and the thistle, not to herself, but *to thee.*

8. You have read the words of the great Law often enough;—have you ever thought enough of them to know the difference between these two appointed means of Distress? The first, the Thorn, is the type of distress *caused by crime,* changing the soft and breathing leaf into inflexible

[1] [See Ruskin's drawing, Plate XI. in *Laws of Fésole* (Vol. XV. p. 477).]
[2] [Compare vol. ii. ch. iv. § 20 (below, p. 463).]
[3] [Genesis i. 11; and for "the great Law" (§ 8), see Genesis iii. 18: "Thorns also and thistles shall it bring forth to thee, and thou shalt eat the herb of the field."]

Drawn by J.Ruskin. Engraved by Hugh Allen.

GERANIUM LUCIDUM AND HERB ROBERT.

and wounding stubbornness. The second is the distress appointed to be the means and herald of good,—

> "Thou shalt see the stubborn thistle bursting
> Into glossy purples, which outredden
> All voluptuous garden roses."[1]

9. It is strange that, after much hunting, I cannot find authentic note of the day when Scotland took the thistle for her emblem;[2] and I have no space (in this chapter at least) for tradition; but, with whatever lightness of construing we may receive the symbol, it is actually the truest that could have been found, for some conditions of the Scottish mind. There is no flower which the Proserpina

[1] [These lines—from Tennyson's *Ode on the Death of the Duke of Wellington* (viii., "He shall find the," etc.)—have hitherto been printed as prose, without quotation marks, and with "purple" and "outreddens." This was a printer's error which Ruskin omitted to correct in proof. The lines are written as verse in the MS., which has an additional passage here:—

"Take your George Herbert and read down to

'Yet since man's scepters are as frail as reeds,
And thorny all their crowns, bloudie their weeds,
I, Who am Truth, turn into truth their deeds.'

Now to understand that verse—much more, what it speaks of—you are to remember that the King's Crown, or Diadem, is the type of his Order, his dominion of Binding and Ordering; and the King's Sceptre, or Rod, is the type of his Ruling, both in mercy and justice, for gift or punishment. 'Stretch out thy rod'—upon the river, for the drink of the sinner;—on the rocks, for the drink of the flock. And the King's Robe is the type of his government for delight in beauty—'who clothed you in scarlet with other delights,' 'all her household are clothed in scarlet.'

"Now when these Kingly Functions are mocked by the King himself, his Crown becomes the symbol, not of beatific and symmetric Order, but of wounding and horrible Dis-order. And his Rod, which should be irrefragable—and *if* flexible, flexible only as a serpent, for greater strength—becomes a Reed in his hand, bent as the winds will. And his Robe of glory, which should be the delight and virtue of his people and therefore his own glory, becomes the misery and guilt of his people, and 'a garment rolled in blood.' But if the King be Royal truly, all these symbols change into their final truth. The crown of his own sleepless care becomes his people's peace. The blood of his own wounds becomes his people's life. The lowliness of his own will becomes his people's law."

Then follows the passage (which, however, Ruskin intended to use in *St. Mark's Rest*) on the Acanthus, already given (p. 280 *n.*). The quotation from George Herbert is from *The Temple* (iv. 2, "The Sacrifice," lines 176–179). On the significance of the king's diadem, see above, p. 161, and below, pp. 308–309. The Bible references here are to Exodus vii. 19, 20 (the turning of the rivers into blood); Numbers xx. 11 ("and the congregation drank, and their beasts also"); 2 Samuel i. 24; Proverbs xxxi. 21; Exodus vii. 10 ("and Aaron cast down his rod before Pharaoh, and before his servants, and it became a serpent"); and Isaiah ix. 5.]

[2] [See the note at the end of the chapter (p. 299).]

Drawn by J.Ruskin. Engraved by Hugh Allen.

GERANIUM LUCIDUM AND HERB ROBERT.

UNIV. OF
CALIFORNIA

Drawn by J. Ruskin. Engraved by George Allen

KNAPWEED.

UNIV. OF
CALIFORNIA

—that these essential faults are all mean faults;—what we may call ground-growing faults; conditions of semi-education, of hardly-treated home-life, or of coarsely-minded and wandering prosperity? How literally may we go back from the living soul symbolized, to the strangely accurate earthly symbol, in the prickly weed! For if, with its bravery of endurance, and carelessness in choice of home, we find also definite faculty and habit of migration, volant mechanism for choiceless journey, not divinely directed in pilgrimage to known shrines; but carried at the wind's will by a spirit which listeth[1] *not*,—it will go hard but that the plant shall become, if not dreaded, at least despised; and, in its wandering and reckless splendour, disgrace the garden of the sluggard, and possess the inheritance of the prodigal: until even its own nature seems contrary to good, and the invocation of the just man be made to it as the executor of Judgment, "Let thistles grow instead of wheat, and cockle instead of barley."[2]

11. Yet to be despised—either for men or flowers—may be no ill-fortune; the real ill-fortune is only to be despicable. These faults of human character, wherever found, observe, belong to it as ill-trained—incomplete; confirm themselves only in the vulgar. There is no base pertinacity, no overweening conceit, in the Black Douglas, or Claverhouse, or Montrose;[3] in these we find the pure Scottish temper, of heroic endurance and royal pride; but, when, in the pay, and not deceived, but purchased, idolatry of Mammon, the Scottish persistence and pride become knit and vested in the spleuchan, and your stiff Covenanter makes his covenant with Death, and your Old Mortality deciphers only the senseless legends of the eternal grave-stone,

Jarvie, his "conception became clearer at every step," although the development of the character led him to diverge from the regular course of his novel, and forced him "to leap hedge and ditch to get back into the route again." Ruskin quotes the passage in *Fors Clavigera*, Letter 83, § 6.]

[1] [See John iii. 8.]

[2] [Job xxxi. 40; quoted also in Vol. XVI. p. 86.]

[3] ["The Black Douglas" is the "good Sir James Douglas" of *Castle Dangerous* (see also *Lord of the Isles*, canto vi. stanza 1, and the note thereon). For Claverhouse and for the "stiff Covenanter" (Balfour of Burley) in *Old Mortality*, see Vol. XXIII. p. 141; and for the *Legend of Montrose, Fiction, Fair and Foul*, § 23.]

—you get your weed, earth-grown, in bitter verity, and earth-devastating, in bitter strength.

12. I have told you elsewhere, we are always first to study national character in the highest and purest examples.[1] But if our knowledge is to be complete, we have to study also the special diseases of national character. And in exact opposition to the most solemn virtue of Scotland, the domestic truth and tenderness breathed in all Scottish song, you have this special disease and mortal cancer, this woody-fibriness, literally, of temper and thought: the consummation of which into pure lignite, or rather black Devil's charcoal—the sap of the birks of Aberfeldy[2] become cinder, and the blessed juices of them, deadly gas,—you may know in its pure blackness best in the work of the greatest of these ground-growing Scotchmen, Adam Smith.[3]

13. No man of like capacity, I believe, born of any other nation, could have deliberately, and with no momentary shadow of suspicion or question, formalized the spinous and monstrous fallacy that human commerce and policy are *naturally* founded on the desire of every man to possess his neighbour's goods.[4]

*This* is the "release unto us Barabbas,"[5] with a witness; and the deliberate systematization of that cry, and choice, for perpetual repetition and fulfilment in Christian statesmanship, has been, with the strange precision of natural symbolism and retribution, signed (as of old, by strewing of ashes on Kidron[6]) by strewing of ashes on the brooks of Scotland; waters once of life, health, music, and divine tradition; but to whose festering scum you may now set fire with a candle; and of which, round the once excelling palace of Scotland, modern sanitary science is now helplessly contending with the poisonous exhalation.[7]

14. I gave this chapter its heading, because I had it in

[1] [See *Modern Painters*, vol. iii. (Vol. V. p. 244).]
[2] [See below, p. 334.]
[3] [See *Fors Clavigera*, Letter 62, § 6.]
[4] [Compare *Unto this Last*, § 1 (Vol. XVII. p. 25).]
[5] [Matthew xxvii. 17.]
[6] [2 Kings xxiii. 12.]
[7] [The drainage of the Palace of Holyrood, then in disrepute, has since been put in order.]

my mind to work out the meaning of the fable in the ninth chapter of Judges,[1] from what I had seen on that thorny ground of mine, where the bramble was king over all the trees of the wood. But the thoughts are gone from me now; and as I re-read the chapter of Judges,—now, except in my memory, unread, as it chances, for many a year,—the sadness of that story of Gideon fastens on me, and silences me. *This* the end of his angel visions, and dream-led victories, the slaughter of all his sons but this youngest,*—and he never again heard of in Israel!

You Scottish children of the Rock, taught through all your once pastoral and noble lives by many a sweet miracle of dew on fleece and ground,—once servants of mighty kings, and keepers of sacred covenant; have you indeed dealt truly with your warrior kings, and prophet saints, or are these ruins of their homes, and shrines, dark with the fire that fell from the curse of Jerubbaal?[2]

---

The following notes, among many kindly sent me on the subject of Scottish Heraldry, seem to be the most trustworthy:—

"The earliest known mention of the thistle as the national badge of Scotland is in the inventory of the effects of James III.; who probably adopted it as an appropriate illustration of the royal motto, *In defence.*

"Thistles occur on the coins of James IV., Mary, James V., and James VI.; and on those of James VI. they are for the first time accompanied by the motto, *Nemo me impune lacessit.*

"A collar of thistles appears on the gold bonnet-pieces of James V. of 1539; and the royal ensigns, as depicted in Sir David Lindsay's armorial register of 1542, are surrounded by a collar formed entirely of golden thistles, with an oval badge attached.

"This collar, however, was a mere device until the institution, or, as it is generally but inaccurately called, the revival, of the order of the Thistle by James VII. (II. of England), which took place on May 29, 1687."

Date of James III.'s reign 1460–1488.

* "Jotham," "Sum perfectio eorum," or "Consummatio eorum." (Interpretation of name in Vulgate Index.)

[1] [Judges ix. 14: "Then said all the trees unto the bramble, Come thou and reign over us."]

[2] [See Judges chaps. vi.–ix.; and for the curse of Jotham, the son of Jerubbaal, ch. ix. 20, 57.]

## CHAPTER VIII

### THE STEM

1. As I read over again, with a fresh mind, the last chapter, I am struck by the opposition of states which seem best to fit a weed for a weed's work,—stubbornness, namely, and flaccidity. On the one hand, a sternness and a coarseness of structure which changes its stem into a stake, and its leaf into a spine; on the other, an utter flaccidity and ventosity of structure, which changes its stem into a riband, and its leaf into a bubble. And before we go farther—for we are not yet at the end of our study of these obnoxious things—we had better complete an examination of the parts of a plant in general, by ascertaining what a Stem proper is;[1] and what makes it stiffer, or hollower, than we like it;—how, to wit, the gracious and generous strength of ash differs from the spinous obstinacy of blackthorn,—and how the geometric and enduring hollowness of a stalk of wheat differs from the soft fulness of that of a mushroom. To which end, I will take up a piece of study, not of black, but white, thorn, written last spring.

2. I suppose there is no question but that all nice people like hawthorn blossom.[2]

I want, if I can, to find out to-day, 25th May, 1875, what it is we like it so much for: holding these two branches of it in my hand,—one full out, the other in youth. This full one is a mere mass of symmetrically balanced—snow, one was going vaguely to write, in the

[1] [See above, p. 273.]

[2] [Compare *Laws of Fésole*, ch. x. § 1, where this passage is referred to (Vol. XV. p. 463).]

first impulse. But it is nothing of the sort. White,—yes, in a high degree; and pure, totally; but not at all dazzling in the white, nor pure in an insultingly rivalless manner, as snow would be; yet pure somehow, certainly; and white, absolutely, in spite of what might be thought failure,—imperfection—nay, even distress and loss in it. For every little rose of it has a green darkness in the centre—not even a pretty green, but a faded, yellowish, glutinous, unaccomplished green; and round that, all over the surface of the blossom, whose shell-like petals are themselves deep sunk, with grey shadows in the hollows of them—all above this already subdued brightness, are strewn the dark points of the dead stamens—manifest more and more, the longer one looks, as a kind of grey sand, sprinkled without sparing over what looked at first unspotted light. And in all the ways of it the lovely thing is more like the spring frock of some prudent little maid of fourteen, than a flower;—frock with some little spotty pattern on it to keep it from showing an unintended and inadvertent spot—if Fate should ever inflict such a thing! Undeveloped, thinks Mr. Darwin,—the poor shortcoming, ill-blanched thorn blossom—going to be a Rose, some day soon; and, what next?—who knows?—perhaps a Pæony!

8. Then this next branch, in dawn and delight of youth, set with opening clusters of yet numerable blossom, four, and five, and seven, edged, and islanded, and ended, by the sharp leaves of freshest green, deepened under the flowers, and studded round with bosses, better than pearl beads of St. Agnes' rosary,—folded, over and over, with the edges of their little leaves pouting, as the very softest waves do on flat sand where one meets another; then opening just enough to show the violet colour within—which yet isn't violet colour, nor even "meno che le rose,"[1] but a different colour from every other lilac that one ever saw;—faint and faded even before it sees light, as the filmy cup opens over

[1] [*Purgatorio*, xxxii. 58.]

the depth of it, then broken into purple motes of tired bloom, fading into darkness, as the cup extends into the perfect rose.

This, with all its sweet change that one would so fain stay, and soft effulgence of bud into softly falling flower, one has watched—how often; but always with the feeling that the blossoms are thrown over the green depth like white clouds,—never with any idea of so much as asking what holds the cloud there. Have each of the innumerable blossoms a separate stalk; and, if so, how is it that one never thinks of the stalk, as one does with currants?

4. Turn the side of the branch to you;—Nature never meant you to see it so; but now it is all stalk below and stamens above,—the petals nothing, the stalks all tiny trees, always dividing their branches mainly into three—one in the centre short, and the two lateral, long, with an intermediate extremely long one, if needed, to fill a gap, so contriving that the flowers shall all be nearly at the same level, or at least surface of ball, like a guelder rose. But the cunning with which the tree conceals its structure till the blossom is fallen, and then—for a little while, we had best look no more at it, for it is all like grape-stalks with no grapes.

These, whether carrying hawthorn blossom and haw, or grape blossom and grape, or peach blossom and peach, you will simply call the "stalk," whether of flower or fruit. A "stalk" is essentially round, like a pillar; and has, for the most part, the power of first developing, and then shaking off, flower and fruit from its extremities. You can pull the peach from its stalk, the cherry, the grape. Always at some time of its existence, the flower-stalk lets fall something of what is sustained, petal or seed.

In late Latin it is called "petiolus," the little foot; because the expanding piece that holds the grape, or olive, is a little like an animal's foot. Modern botanists have misapplied the word to the *leaf*-stalk, which has no resemblance to a foot at all. We must keep the word to its

proper meaning, and, when we want to write Latin, call it "petiolus"; when we want to write English, call it "stalk," meaning always fruit or flower stalk.

I cannot find when the word "stalk" first appears in English:—its derivation will be given presently.[1]

5. Gather next a hawthorn leaf. That also has a stalk; but you can't shake the leaf off it. It, and the leaf, are essentially one; for the sustaining fibre runs up into every ripple or jag of the leaf's edge: and its section is different from that of the flower-stalk; it is no more round, but has an upper and under surface, quite different from each other. It will be better, however, to take a larger leaf to examine this structure in. Cabbage, cauliflower, or rhubarb, would any of them be good, but don't grow wild in the luxuriance I want. So, if you please, we will take a leaf of burdock (Arctium Lappa), the principal business of that plant being clearly to grow leaves wherewith to adorn foregrounds.*

6. The outline of it in Sowerby[2] is not an intelligent one, and I have not time to draw it but in the rudest way myself; Fig. 13, *a*; with perspectives of the elementary form below, *b*, *c*, and *d*. By help of which, if you will construct a burdock leaf in paper, my rude outline (*a*) may tell the rest of what I want you to see.

Take a sheet of stout note paper, Fig. 14, A, double it sharply down the centre, by the dotted line, then give it the two cuts at *a* and *b*, and double those pieces sharply back, as at B; then, opening them again, cut the whole into the form C; and then, pulling up the corners *c d*, stitch them together with a loose thread so that the points *c* and *d* shall be within half an inch of each other; and

* If you will look at the engraving, in the England and Wales series, of Turner's Okehampton,[3] you will see its use.

---

[1] [See below, § 26, p. 316.]
[2] [Vol. v. p. 23, Plate 1199.]
[3] [See the reproduction of this drawing in Vol. III. p. 410.]

you will have a kind of triangular scoop, or shovel, with a stem, by which you can sufficiently hold it, D.

7. And from this easily constructed and tenable model, you may learn at once these following main facts about all leaves.

(I.) That they are not flat, but, however slightly, always hollowed into craters, or raised into hills, in one or another direction; so that any drawable outline of them does not in the least represent the real extent of their surfaces; and until you know how to draw a cup, or a mountain, rightly, you have no chance of drawing a leaf. My simple artist readers of long ago, when I told them to draw leaves,[1] thought they could do them by the bough-full, whenever they liked. Alas, except by old William Hunt, and Burne-Jones,[2] I've not seen a leaf painted, since those burdocks of Turner's; far less sculptured — though one would think at first that was easier! Of which we shall have talk elsewhere;[3] here I must go on to note fact number two, concerning leaves.

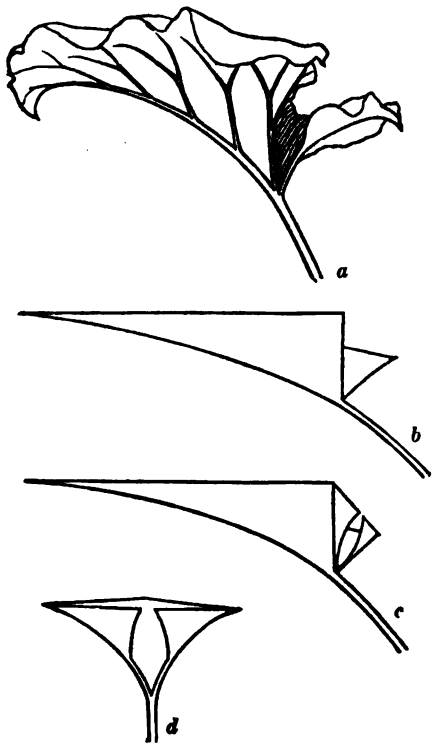


Fig. 18

8. (II.) The strength of their supporting stem consists not merely in the gathering together of all the fibres, but

[1] [See *Modern Painters*, vol. v. (Vol. VII. p. 52: "If you can paint *one* leaf, you can paint the world").]
[2] [See the "Notes on Educational Series," No. 223 (Vol. XXI. p. 140).]
[3] [This talk, however, was not given.]

in gathering them essentially into the profile of the letter V, which you will see your doubled paper stem has; and of which you can feel the strength and use, in your hand, as you hold it. Gather a common plantain leaf, and look at the way it puts its round ribs together at the base, and you will understand the matter at once. The arrangement is modified and disguised in every possible way, according to the leaf's need: in the aspen, the leaf-stalk becomes

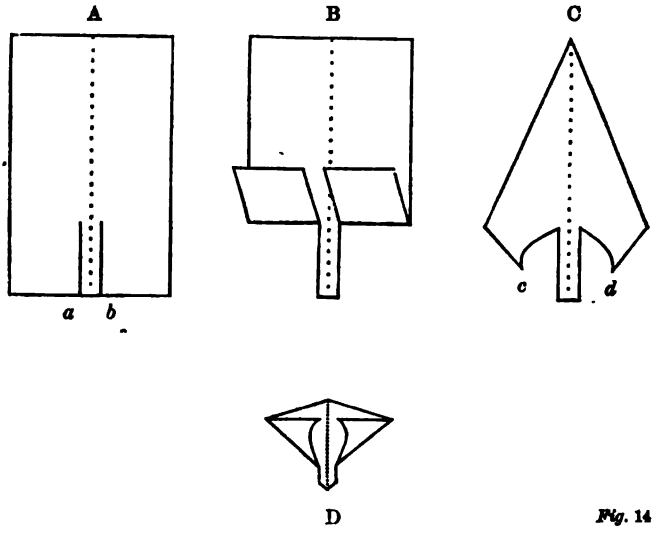



Fig. 14

an absolute vertical plank; and in the large trees is often almost rounded into the likeness of a fruit-stalk;—but, in all,* the essential structure is this doubled one; and in all, it opens at the place where the leaf joins the main stem, into a kind of cup, which holds next year's bud in the hollow of it.

9. Now there would be no inconvenience in your simply getting into the habit of calling the round petiol of the fruit the "stalk," and the contracted channel of the leaf,

* General assertions of this kind must always be accepted under indulgence,—exceptions being made afterwards.

"leaf-stalk." But this way of naming them would not enforce, nor fasten in your mind, the difference between the two, so well as if you have an entirely different name for the leaf-stalk. Which is the more desirable, because the limiting character of the leaf, botanically, is—(I only learned this from my botanical friend the other day, just in the very moment I wanted it)—that it holds the bud of the new stem in its own hollow, but cannot itself grow in the hollow of anything else;—or, in botanical language, leaves are never axillary,—don't grow in armpits, but are themselves armpits; hollows, that is to say, where they spring from the main stem.

10. Now there is already a received and useful botanical word, "cyme" (which we shall want in a little while), derived from the Greek κῦμα, a swelling or rising wave, and used to express a swelling cluster of foamy blossom. Connected with that word, but in a sort the reverse of it, you have the Greek "κύμβη," the *hollow* of a cup, or bowl; whence κύμβαλον, cymbal,—that is to say, a musical instrument owing its tone to its *hollowness*. These words become in Latin, cymba, and cymbalum; and I think you will find it entirely convenient and advantageous to call the leaf-stalk distinctively the "cymba," retaining the mingled idea of cup and boat, with respect at least to the part of it that holds the bud; and understanding that it gathers itself into a V-shaped, or even narrowly vertical, section, as a boat narrows to its bow, for strength to sustain the leaf.

With this word you may learn the Virgilian line, that shows the final use of iron—or iron-darkened ships:—

"Et ferrugineâ subvectat corpora cymbâ."[1]

The "subvectat corpora" will serve to remind you of the office of the leafy cymba in carrying the bud; and make you thankful that the said leafy vase is not of iron; and is a ship of Life instead of Death.

[1] [*Æneid*, vi. 303.]

11. Already, not once, nor twice, I have had to use the word "stem," of the main round branch from which both stalk and cymba spring. This word you had better keep for all growing, or advancing, shoots of trees, whether from the ground, or from central trunks and branches. I regret that the words multiply on us; but each that I permit myself to use has its own proper thought or idea to express, as you will presently perceive; so that true knowledge multiplies with true words.

12. The "stem," you are to say, then, when you mean the *advancing* shoot,—which lengthens annually, while a stalk ends every year in a blossom, and a cymba in a leaf. A stem is essentially round,* square, or regularly polygonal; though, as a cymba may become exceptionally round, a stem may become exceptionally flat, or even mimic the shape of a leaf. Indeed I should have liked to write "a stem is essentially round, and constructively, on occasion, square," —but it would have been too grand. The fact is, however, that a stem is really a roundly minded thing, throwing off its branches in circles as a trundled mop throws off drops, though it can always order the branches to fly off in what order it likes,—two at a time, opposite to each other; or three, or five, in a spiral coil; or one here and one there, on this side and that; but it is always twisting, in its own inner mind and force; hence it is especially proper to use the word "stem" of it—*στέμμα*, a twined wreath; properly, twined round a staff, or sceptre: therefore, learn at once by heart these lines in the opening *Iliad*:—

> "Στέμματ' ἔχων ἐν χερσὶν ἑκηβόλου Ἀπόλλωνος,
> Χρυσέῳ ἀνὰ σκήπτρῳ·"[1]

And recollect that a sceptre is properly a staff to lean upon; and that as a crown or diadem is first a binding

* I use "round" rather than "cylindrical," for simplicity's sake.

[1] [*Iliad*, i. 14.]

thing,[1] a "sceptre" is first a *supporting* thing, and it is in its nobleness, itself made of the stem of a young tree. You may just as well learn also this:—

> "Ναὶ μὰ τόδε σκῆπτρον, τὸ μὲν οὔ ποτε φύλλα καὶ ὄζους
> Φύσει, ἐπεὶ δὴ πρῶτα τομὴν ἐν ὄρεσσι λέλοιπεν,
> Οὐδ' ἀναθηλήσει· περὶ γάρ ῥά ἑ χαλκὸς ἔλεψεν
> Φύλλα τε καὶ φλοιόν· νῦν αὖτέ μιν υἷες Ἀχαιῶν
> Ἐν παλάμῃς φορέουσι δικασπόλοι, οἵ τε θέμιστας
> Πρὸς Διὸς εἰρύαται·"[2]
>
> "Now, by this sacred sceptre hear me swear
> Which never more shall leaves or blossoms bear,
> Which, severed from the trunk (as I from thee),
> On the bare mountains left its parent tree;
> This sceptre, formed by tempered steel to prove
> An ensign of the delegates of Jove,
> From whom the power of laws and justice springs
> (Tremendous oath, inviolate to Kings)."

18. The supporting power in the tree itself is, I doubt not, greatly increased by this spiral action;[3] and the fine instinct of its being so, caused the twisted pillar[4] to be used in the Lombardic Gothic,—at first, merely as a pleasant variety of form, but at last constructively and universally, by Giotto, and all the architects of his school. Not that the spiral form actually adds to the strength of a Lombardic pillar, by imitating contortions of wood, any more than the fluting of a Doric shaft adds to its strength by imitating the canaliculation of a reed; but the perfect action of the imagination, which had adopted the encircling acanthus for the capital, adopted the twining stemma for the shaft; the pure delight of the eye being the first condition in either case: and it is inconceivable how much of the pleasure taken both in ornament and in natural form is founded elementarily on groups of spiral line. The study, in our

[1] [Compare the passage from the MS. given above, p. 295 *n.*]

[2] [*Iliad*, i. 234–239; compare Vol. XXI. p. 110. The version which follows is from Pope's *Homer* (*Iliad*, i. 309).]

[3] [Compare *Fors Clavigera*, Letter 62, where Ruskin, in remarking that "the stems of plants are always spirals," refers to the present chapter.]

[4] [Compare Vol. IX. pp. 356–358.]

**Occult Spiral Action.**
**WASTE - THISTLE.**

Plate XVI., of the involucre of the waste-thistle,* is as good an example as I can give of the more subtle and concealed conditions of this structure.

14. Returning to our present business of nomenclature, we find the Greek word, "stemma," adopted by the Latins, becoming the expression of a growing and hereditary race; and the branched tree, the natural type, among all nations, of multiplied families. Hence the entire fitness of the word for our present purposes; as signifying, "a spiral shoot extending itself by branches." But since, unless it is spiral, it is not a stem, and unless it has branches, it is not a stem, we shall still want another word for the sustaining "sceptre" of a foxglove, or cowslip. Before determining that, however, we must see what need there may be of one familiar to our ears until lately, although now, I understand, falling into disuse.

15. By our definition, a stem is a spirally[1] bent, essentially living and growing, shoot of vegetation. But the branch of a tree, in which many such stems have their origin, is not, except in a very subtle and partial way, spiral; nor except in the shoots that spring from it, progressive forwards; it only receives increase of thickness at its sides. Much more, what used to be called the *trunk* of a tree, in which many branches are united, has ceased to be, except in mere tendency and temper, spiral; and has so far ceased from growing as to be often in a state

* Carduus Arvensis. "Creeping Thistle," in Sowerby;[2] why, I cannot conceive, for there is no more creeping in it than in a furze-bush. But it especially haunts foul and neglected ground; so I keep the Latin name, translating "Waste-Thistle." I could not show the variety of the curves of the involucre without enlarging; and if, on this much increased scale, I had tried to draw the flower, it would have taken Mr. Allen and me a good month's more work. And I had no more a month than a life, to spare: so the action only of the spreading flower is indicated, but the involucre drawn with precision.

[1] [But see ii. ch. vii. § 4 (p. 484).]
[2] [Vol. v. p. 17, and Plates 593, 594.]

of decay in its interior, while the external layers are still in serviceable strength.

16. If, however, a trunk were only to be defined as an arrested stem, or a cluster of arrested stems, we might perhaps refuse, in scientific use, the popular word. But such a definition does not touch the main idea. Branches usually begin to assert themselves at a height above the ground approximately fixed for each species of tree,—low in an oak, high in a stone pine; but, in both, marked as a point of *structural change in the direction of growing force*, like the spring of a vault from a pillar; and as the tree grows old, some of its branches getting torn away by winds or falling under the weight of their own fruit, or load of snow, or by natural decay, there remains literally a "truncated" mass of timber, still bearing irregular branches here and there, but inevitably suggestive of resemblance to a human body, after the loss of some of its limbs.

And to prepare trees for their practical service, what age and storm only do partially, the first rough process of human art does completely. The branches are lopped away, leaving literally the "truncus" as the part of the tree out of which log and rafter can be cut. And in many trees, it would appear to be the chief end of their being to produce this part of their body on a grand scale, and of noble substance; so that, while in thinking of vegetable life without reference to its use to men or animals, we should rightly say that the essence of it was in leaf and flower—not in trunk or fruit; yet for the sake of animals, we find that some plants, like the vine, are apparently meant chiefly to produce fruit; others, like laurels, chiefly to produce leaves; others chiefly to produce flowers; and others to produce permanently serviceable and sculpturable wood; or, in some cases, merely picturesque and monumental masses of vegetable rock, "intertwisted fibres serpentine,"[1]—of far nobler

[1] [Wordsworth: *Yew-Trees*. The lines are quoted in *Modern Painters*, vol. ii. (Vol. IV. p. 298), and vol. iii. (Vol. V. p. 358).]

and more pathetic use in their places, and their enduring age, than ever they could be for material purpose in human habitation. For this central mass of the vegetable organism, then, the English word "trunk" and French "tronc" are always in accurate scholarship to be retained—meaning the part of a tree which remains when its branches are lopped away.

17. We have now got distinct ideas of four different kinds of stem, and simple names for them in Latin and English,—Petiolus, Cymba, Stemma, and Truncus; Stalk, Leaf-stalk, Stem, and Trunk; and these are all that we shall commonly need. There is, however, one more that will be sometimes necessary, though it is ugly and difficult to pronounce, and must be as little used as we can.

And here I must ask you to learn with me a little piece of Roman history. I say, to *learn* with me, because I don't know any Roman history except the two first books of Livy,[1] and little bits here and there of the following six or seven. I only just know enough about it to be able to make out the bearings and meaning of any fact that I now learn. The greater number of modern historians know (if honest enough even for that) the facts, or something that may possibly be like the facts, but haven't the least notion of the meaning of them. So that, though I have to find out everything that I want in Smith's Dictionary, like any schoolboy, I can usually tell you the significance of what I so find, better than perhaps even Mr. Smith himself could.

18. In the 586th page of Mr. Smith's volume,[2] you have it written that "Calvus," bald-head, was the name of a family of the Licinia gens; that the man of whom we hear earliest, as so named, was the first plebeian elected to military tribuneship in B.C. 400; and that the fourth of whom we hear, was surnamed "Stolo," because he was so

[1] [Compare Vol. XXII. p. 269, and Vol. XXIII. p. 370.]

[2] [*Dictionary of Greek and Roman Biography and Mythology*, edited by William Smith, LL.D., 1844, 3 vols. Ruskin here refers to vol. i.]

particular in pruning away the Stolons (stolones), or useless young shoots, of his vines.

We must keep this word "stolon," therefore, for these young suckers springing from an old root. Its derivation is uncertain; but the main idea meant by it is one of uselessness—sprouting without occasion or fruit; and the words "stolidus" and "stolid" are really its derivatives, though we have lost their sense in English by partly confusing them with "solid," which they have nothing to do with. A "stolid" person is essentially a "useless sucker" of society; frequently very leafy and graceful, but with no good in him.

*Fig. 15*

19. Nevertheless, I won't allow our vegetable "stolons" to be despised. Some of quite the most beautiful forms of leafage belong to them;—even the foliage of the olive itself is never seen to the same perfection on the upper branches as in the young ground-rods in which the dual groups of leaves crowd themselves in their haste into clusters of three.

But, for our point of Latin history, remember always that in 400 B.C., just a year before the death of Socrates at Athens, this family of Stolid persons manifested themselves at Rome, shooting up from plebeian roots into places where they had no business; and preparing the way for the degradation of the entire Roman race under the Empire; their success being owed, remember also, to the faults of the patricians, for one of the laws passed by Calvus Stolo was that the Sibylline books should be in custody of ten men, of whom five should be plebeian, "that no falsifications might be introduced in favour of the patricians."

20. All this time, however, we have got no name for the prettiest of all stems,—that of annual flowers growing high from among their ground leaves, like lilies of the

valley, and saxifrages, and the tall primulas—of which this pretty type, Fig. 15,[1] was cut for me by Mr. Burgess years ago; admirable in its light outline of the foamy globe of flowers, supported and balanced in the meadow breezes on that elastic rod of slenderest life.

What shall we call it? We had better rest from our study of terms a little, and do a piece of needful classifying, before we try to name it.

21. My younger readers will find it easy to learn, and convenient to remember, for a beginning of their science, the names of twelve great families of cinquefoiled flowers,* of which the first group of three is for the most part golden, the second, blue, the third, purple, and the fourth, red.

And their names, by simple lips, can be pleasantly said, or sung, in this order, the two first only being a little difficult to get over.

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| Roof-foil, | Lucy, | Pea, | Pink, |
| Rock-foil, | Blue-bell, | Pansy, | Peach, |
| Primrose. | Bindweed. | Daisy. | Rose. |

Which even in their Latin magniloquence will not be too terrible,[2] namely,—

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| Stella, | Lucia, | Alata, | Clarissa,[3] |
| Francesca, | Campanula, | Viola, | Persica, |
| Primula. | Convoluta. | Margarita. | Rosa. |

* The florets gathered in the daisy are cinquefoils, examined closely. No system founded on colour can be very general or unexceptionable: but the splendid purples of the pansy, and thistle, which will be made one of the lower composite groups under Margarita, may justify the general assertion of this order's being purple.

[1] [The plant is Draba Alpina (mountain yellow whitlow-grass). The woodcut is made from *Flora Danica*, vol. i., Plate 56.]

[2] [This is a provisional classification "for memoria technica": see below, p. 357 n.]

[3] [Compare *Laws of Fésole*, ch. vii. § 24 (Vol. XV. p. 427); but in *Fors Clavigera*, Letter 74, Ruskin proposed to substitute the name "Clara" (with the Dianthus as the first sub-species).]

22. I do not care much to assert or debate my reasons for the changes of nomenclature made in this list. The most gratuitous is that of "Lucy" for "Gentian," because the King of Macedon,[1] from whom the flower has been so long named, was by no means a person deserving of so consecrated memory. I conceive no excuse needed for rejecting Caryophyll,[2] one of the crudest and absurdest words ever coined by unscholarly men of science; or Papilionaceæ, which is unendurably long for pease;[3] and when we are now writing Latin, in a sentimental temper, and wish to say that we gathered a daisy, we shall not any more be compelled to write that we gathered a "Bellidem perennem," or, an "Oculum Diei."

I take the pure Latin form, Margarita, instead of Margareta, in memory of Margherita of Cortona,* as well as of the great saint: also the tiny scatterings and sparklings of the daisy on the turf may remind us of the old use of the word "Margaritæ," for the minute particles of the Host sprinkled on the patina—"Has particulas μερίδας vocat Euchologium, μαργαρίτας Liturgia Chrysostomi."† My young German readers will, I hope, call the flower Gretchen,—unless they would uproot the daisies of the Rhine, lest French girls should also count their love-lots by the Marguerite. I must be so ungracious to my fair young readers, however, as to warn them that this trial of their lovers is

* See Miss Yonge's exhaustive account of the name, *History of Christian Names*, vol. i., p. 265.

† (Du Cange.[4]) The word "Margarete" is given as heraldic English for pearl, by Lady Juliana Berners, in the book of St. Albans.[5]

---

[1] [See Pliny, *Nat. Hist.*, xxv. 34: "Gentianam invenit Gentius rex Illyriorum," and similarly Dioscorides, iii. 3.]

[2] [καρυόφυλλον, *nut leaf*; hence Caryphylleæ, the order in which the pink is placed. Compare below, pp. 318, 339, 346.]

[3] [Compare below, p. 346.]

[4] [*Glossarium ad Scriptores Mediæ et Infimæ Latinatis*, vol. iv. p. 545.]

[5] [*The Gentlemans Academie, or The Booke of S. Albans; containing three most exact and excellent Bookes: the first of Hawking, the second of all the proper termes of Hunting, and the last of Armorie*, by Dame Juliana Berners. First printed 1486. For "Margarete," see p. 45 of the edition of 1595.]

UNIV. OF
CALIFORNIA

a very favourable one, for, in nine blossoms out of ten, the leaves of the Marguerite are odd, so that, if they are only gracious enough to begin with the supposition that he loves them, they must needs end in the conviction of it.

23. I am concerned, however, for the present, only with my first or golden order, of which the Roof-foil, or house-leek, is called in present botany, Sedum, "the squatter," because of its way of fastening itself down on stones, or roof, as close as it can sit. But I think this an ungraceful notion of its behaviour; and as its blossoms are, of all flowers, the most sharply and distinctly star-shaped, I shall call it "Stella" (providing otherwise, in due time, for the poor little chickweeds); and the common stonecrop will therefore be "Stella domestica."

The second tribe (at present saxifraga), growing for the most part wild on rocks, may, I trust, even in Protestant botany, be named Francesca, after St. Francis of Assisi; not only for its modesty, and love of mountain ground, and poverty of colour and leaf; but also because the chief element of its decoration, seen close, will be found in its spots, or stigmata.[1]

In the nomenclature of the third tribe I make no change.

24. Now all this group of golden-blossoming plants agree in general character of having a rich cluster of radical leaves, from which they throw up a single stalk bearing clustered blossoms; for which stalk, when entirely leafless, I intend always to keep the term "virgula," the "little rod"[2]—not painfully caring about it, but being able thus to define it with precision, if required. And these are connected with the stems of branching shrubs through infinite varieties of structure, in which the first steps of transition are made by carrying the cluster of radical leaves up, and letting them expire gradually from the rising stem: the changes

[1] [Compare *Catalogue of the Rudimentary Series, 1878*, No. 230, and the illustration there given (Vol. XXI. p. 284).]

[2] [Compare vol. ii. ch. ii. § 5 (below, p. 427).]

of form in the leaves as they rise higher from the ground being one of quite the most interesting specific studies in every plant. I had set myself once, in a bye-study for foreground drawing, hard on this point; and began, with Mr. Burgess, a complete analysis of the foliation of annual stems; of which Line-studies II., III., and IV., are examples; reduced copies, all, from the beautiful *Flora Danica*. But after giving two whole lovely long summer days, under the Giessbach,[1] to the blue scabious ("Devil's bit"), and getting in that time, only half-way up it, I gave in; and must leave the work to happier and younger souls.

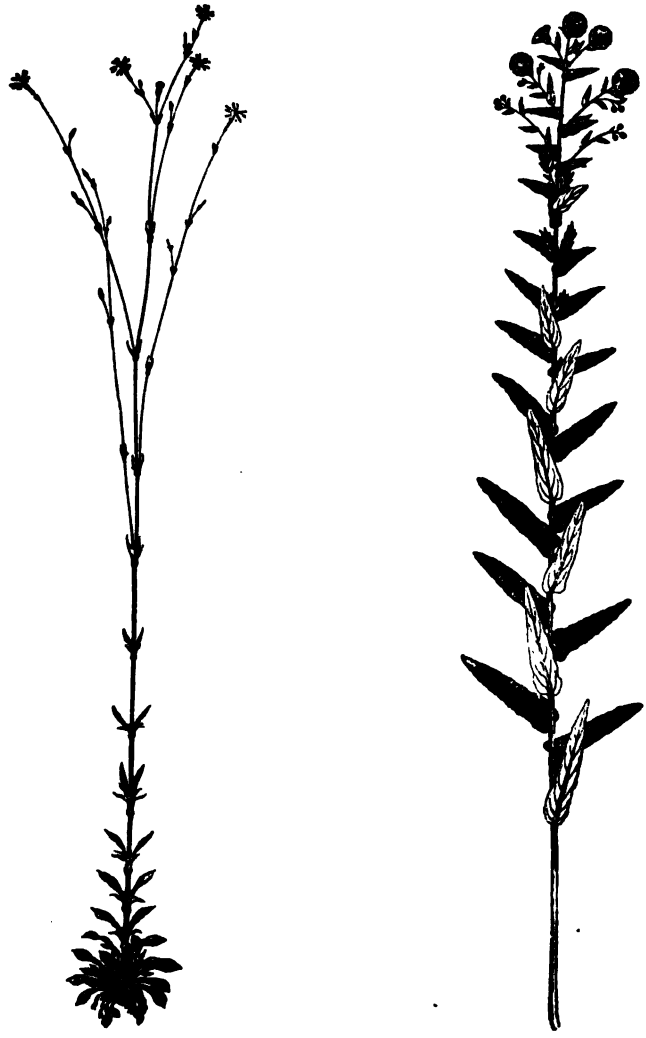
25. For these flowering stems, therefore, possessing nearly all the complex organization of a tree, but not its permanence, we will keep the word "virga"; and "virgula" for those that have no leaves. I believe, when we come to the study of leaf-order, it will be best to begin with these annual virgæ, in which the leaf has nothing to do with preparation for a next year's branch. And now the remaining terms commonly applied to stems may be for the most part dispensed with; but several are interesting, and must be examined before dismissal.

26. Indeed, in the first place, the word we have to use so often, "stalk," has not been got to the roots of, yet. It comes from the Greek στέλεχος (stelechos), the "holding part" of a tree, that which is like a handle to all its branches; "stock" is another form in which it has come down to us: with some notion of its being the mother of branches: thus, when Athena's olive was burnt by the Persians, two days after, a shoot a cubit long had sprung from the "stelechos" of it.[2]

27. Secondly. Few words are more interesting to the modern scholarly and professorial mind than "stipend." (I have twice a year at present to consider whether I am worth mine, sent with compliments from the Curators of

[1] [In 1869: see Vol. XIX. p. lxi.]

[2] [Herodotus, viii. 55: "a shoot had run up from the stock of the tree" (ἐκ τοῦ στελέχεος).]



A B

Line-Study ii

the University chest.) Now, this word comes from "stips," small pay, which itself comes from "stipo," to press together, with the idea of small coin heaped up in little towers or piles. But with the idea of lateral pressing together, instead of downward, we get "stipes," a solid log; in Greek, with the same sense, στύπος (stupos), whence, gradually, with help from another word meaning to beat (and a side-glance at beating of hemp), we get our "stupid," the German stumph, the Scottish sumph, and the plain English "stump."

Refining on the more delicate sound of stipes, the Latins got "stipula,"[1] the thin stem of straw: which rustles and ripples daintily in verse, associated with spica and spiculum, used of the sharp-pointed ear of corn, and its fine processes of fairy shafts.

28. There are yet two more names of stalk to be studied, though, except for particular plants, not needing to be used, —namely, the Latin cau-dex, and cau-lis, both connected with the Greek καυλός, properly meaning a solid stalk like a handle, passing into the sense of the hilt of a sword, or quill of a pen. Then, in Latin, caudex passes into the sense of log, and so, of cut plank or tablet of wood; thus finally becoming the classical "codex" of writings engraved on such wooden tablets, and therefore generally used for authoritative manuscripts.

Lastly, "caulis," retained accurately in our cauliflower, contracted in "colewort," and refined in "kail," softens itself into the French "chou," meaning properly the whole family of thick-stalked eatable salads with spreading heads; but these being distinguished explicitly by Pliny as "Capitati,"[2] "salads with a head," or "Captain salads," the mediæval French softened the "caulis capitatus" into "chou cabus"; —or, to separate the round or apple-like mass of leaves from the flowery foam, "cabus" simply, by us at last enriched and emphasized into "cabbage."

29. I believe we have now got through the stiffest piece

[1] [Compare vol. ii. ch. i. § 27 (below, p. 404).]
[2] [It is to onions that Pliny applies the epithet: see *Nat. Hist.*, xix. 6, 32.]

of etymology we shall have to master in the course of our botany; but I am certain that young readers will find patient work, in this kind, well rewarded by the groups of connected thoughts which will thus attach themselves to familiar names; and their grasp of every language they learn must only be esteemed by them secure when they recognize its derivatives in these homely associations, and are as much at ease with the Latin or French syllables of a word as with the English ones; this familiarity being above all things needful to cure our young students of their present ludicrous impression that what is simple, in English, is knowing, in Greek; and that terms constructed out of a dead language will explain difficulties which remained insoluble in a living one. But Greek is *not* yet dead:[1] while if we carry our unscholarly nomenclature much further, English soon will be; and then doubtless botanical gentlemen at Athens will for some time think it fine to describe what we used to call caryophyllaceæ, as the *νυτλήφιδες*.[2]

30. For indeed we are all of us yet but schoolboys, clumsily using alike our lips and brains; and with all our mastery of instruments and patience of attention, but few have reached, and those dimly, the first level of science,—wonder.

For the first instinct of the stem,—unnamed by us yet—unthought of,—the instinct of seeking light, as of the root to seek darkness,[3]—what words can enough speak the wonder of it!

Look. Here is the little thing, Line-study V. (A), in its first birth to us: the stem of stems; the one of which we pray that it may bear our daily bread. The seed has fallen in the ground with the springing germ of it downwards; with heavenly cunning the taught stem curls round,

[1] [Compare the Preface to *Love's Meinie*, above, p. 15.]

[2] [Hitherto *δλήφιδες* (headleaf-ides in Greek letters), but this was a slip which Ruskin marked for correction as in the text (nutleaf-ides, the English of caryophyllaceæ printed in Greek letters).]

[3] [See above, p. 218.]

**Line-Study v**

"Behold, a Sower went forth to sow

and seeks the never-seen light. Veritable "conversion," miraculous, called of God.[1] And here is the oat germ (B)—after the wheat, most vital of divine gifts; and assuredly, in days to come, fated to grow on many a naked rock in hitherto lifeless lands, over which the glancing sheaves of it will shake sweet treasure of innocent gold.

And who shall tell us how they grow; and the fashion of their rustling pillars—bent, and again erect, at every breeze? Fluted shaft or clustered pier, how poor of art, beside this grass-shaft—built, first to sustain the food of men, then to be strewn under their feet!

We must not stay to think of it, yet, or we shall get no farther till harvest has come and gone again. And having our names of stems now determined enough, we must in next chapter try a little to understand the different kinds of them.

[1] [Hebrews v. 4.]

# CHAPTER IX

## OUTSIDE AND IN

1. THE elementary study of methods of growth, given in the following chapter, has been many years written (the greater part soon after the fourth volume of *Modern Painters*), and ought now to be rewritten entirely; but having no time to do this, I leave it with only a word or two of modification,[1] because some truth and clearness of incipient notion will be conveyed by it to young readers, from which I can afterwards lop the errors, and into which I can graft the finer facts, better than if I had a less blunt embryo to begin with.

2. A stem, then, broadly speaking (I had thus began the old chapter), is the channel of communication between the leaf and root; and if the leaf can grow directly from the root, there is no stem: so that it is well first to conceive of all plants as consisting of leaves and roots only, with the condition that each leaf must have its own quite particular root* somewhere. Let *a b c*, Fig. 16, be three leaves each, as you see, with its own root, and by no means dependent on other leaves for its daily bread; and let the horizontal line be the surface of the ground. Then the plant has no stem, or an underground one. But if the three leaves rise above the ground, as in Fig. 17, they must reach their roots by elongating their stalks, and this elongation is

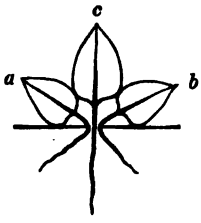


*Fig.* 16

* Recent botanical research makes this statement more than dubitable. Nevertheless, on no other supposition can the forms and action of tree-branches, so far as at present known to me, be yet clearly accounted for.

[1] [And also of addition; as, for example, the last sentence of § 2, referring to plans for the Oxford School.]

the stem of the plant. If the outside leaves grow last and are therefore youngest, the plant is said to grow from the outside. You know that "ex" means out, and that "gen" is the first syllable of Genesis (or creation), therefore the old botanists, putting an o between the two syllables, called plants whose outside leaves grew last, Ex-o-gens. If the inside leaf grows last, and is youngest, the plant was said to grow from the inside, and from the Greek Endon, within, called an "Endo-gen." If these names are persisted in, the Greek botanists, to return the compliment, will of course call Endogens Ἰνσειδβόρνιδες, and Exogens Ὀυτσειδβόρνιδες. In the Oxford school, they will be called simply Inlaid and Outlaid.

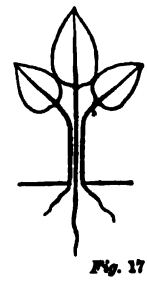


Fig. 17

8. You see that if the outside leaves are to grow last, they may conveniently grow two at a time; which they accordingly do, and exogens always start with two little leaves from their roots, and may therefore conveniently be called two-leaved; which, if you please, we will for our parts call them. The botanists call them "two-suckered," and can't be content to call them *that* in English; but drag in a long Greek word, meaning the fleshy sucker of the sea-devil,—"cotyledon," which, however, I find is practically getting shortened into "cot," and that they will have to end by calling endogens, monocots, and exogens, bicots. I mean steadily to call them one-leaved and two-leaved, for this further reason, that they differ not merely in the single or dual springing of first leaves from the seed; but in the distinctly single or dual arrangement of leaves afterwards on the stem; so that, through all the complexity obtained by alternate and spiral placing, every bicot or two-leaved flower or tree is in reality composed of dual groups of leaves, separated by a given length of stem; as, most characteristically in this pure mountain type of the Ragged Robin (Clarissa laciniosa[1]), Fig. 18; and compare A, and B,

[1] [Ruskin's name for it; its botanical name is *Lychnis flos-cuculi*.]

Line-study II. [Plate XVIII.]; while, on the other hand, the monocot plants are by close analysis, I think, always resolvable into successively climbing leaves, sessile on one another, and sending their roots, or processes, for nourishment, down through one another, as in Fig. 19.

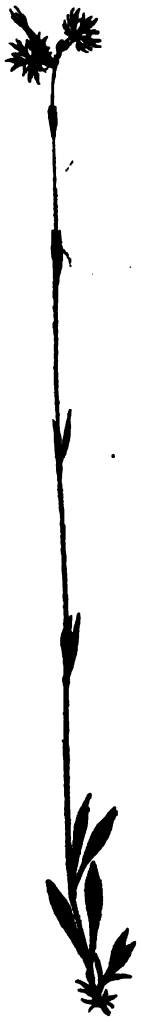


Fig. 18

4. Not that I am yet clear, at all, myself; but I do think it's more the botanists' fault than mine, what "cotyledonous" structure there may be at the outer base of each successive bud; and still less, how the intervenient length of stem, in the bicots, is related to their power, or law, of branching. For not only the two-leaved tree is outlaid, and the one-leaved inlaid, but the two-leaved tree is branched, and the one-leaved tree is not branched. This is a most vital and important distinction, which I state to you in very bold terms, for though there are some apparent exceptions to the law, there are, I believe, no real ones, if we define a branch rightly. Thus, the head of a palm tree is merely a cluster of large leaves; and the spike of a grass, a clustered blossom. The stem, in both, is unbranched; and we should be able in this respect to classify plants very simply indeed, but for a provoking species of intermediate creatures whose branching is always in the manner of corals, or sponges, or arborescent minerals, irregular and accidental, and essentially, therefore, distinguished from the systematic anatomy of a truly branched tree. Of these presently;[1] we must go on by very short steps: and I find no step can be taken without check from existing generalizations. Sowerby's definition of Monocotyledons, in his ninth volume, begins thus: "Herbs (or rarely, and only in exotic genera), trees, in which the wood, pith, and bark

[1] [This subject, however, was not resumed.]

are indistinguishable."[1] Now if there be one plant more than another in which the pith is defined, it is the common Rush; while the nobler families of true herbs derive their principal character from being pithless altogether! We cannot advance too slowly.

Fig. 19

5. In the families of one-leaved plants in which the young leaves grow directly out of the old ones, it becomes a grave question for them whether the old ones are to lie flat or edgeways, and whether they must therefore grow out of their faces or their edges. And we must at once understand the way they contrive it, in either case.

Among the many forms taken by the Arethusan leaf,[2] one of the commonest is long and gradually tapering,—much broader at the base than the point. We will take such an one for examination, and suppose that it is growing on the ground as in Fig. 20, with a root to its every fibre. Cut out a piece of strong paper roughly into the shape of this Arethusan leaf, a, Fig. 21. Now suppose the next young leaf has to spring out of the front of this one, at about the middle of its height. Give it two nicks with the scissors at b b; then roll up the lower part into a cylinder (it will overlap a good deal at the bottom), and tie it fast with a fine thread: so, you will get the form at c. Then bend the top of it back, so that, seen sideways, it appears as at d, and you see you have made quite a little flower-pot to plant your new leaf in, and perhaps it may occur to you that you have seen something like this before. Now make another, a little less wide, but with the part for the cylinder twice as long, roll it up in the same way, and slip it inside the

Fig. 20

[1] [Vol. ix. p. 1, 3rd edition.]
[2] [See above, p. 241.]

other, with the flat part turned the other way, e. Surely this reminds you now of something you have seen? Or must I draw the something (Fig. 22)?

6. All grasses are thus constructed, and have their leaves set thus, opposite, on the sides of their tubular stems, alternately, as they ascend. But in most of them there is also a peculiar construction, by which, at the base of the sheath,

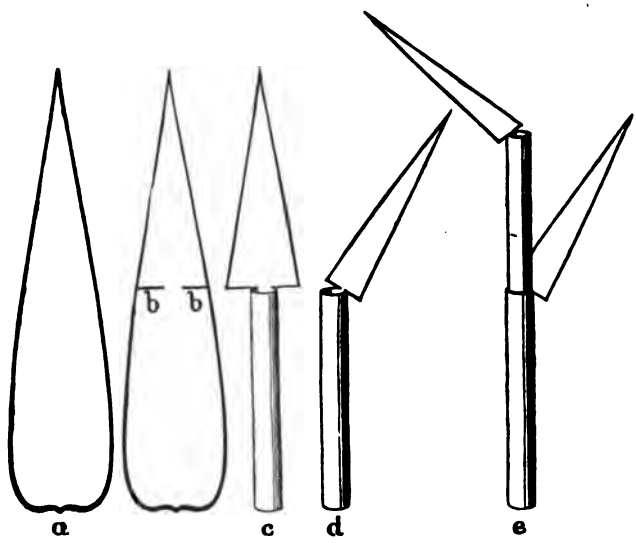



Fig. 21.

or enclosing tube, each leaf articulates itself with the rest of the stem at a ringed knot, or joint.

Before examining these, remember there are mainly two sorts of joints in the framework of the bodies of animals. One is that in which the bone is thick at the joints and thin between them (see the bone of the next chicken leg you eat), the other is that of animals that have shells or horny coats, in which characteristically the shell is thin at the joints, and thick between them (look at the next lobster's claw you can see, without eating). You know, also, that though the crustaceous are titled only from their crusts, the name "insect" is given to the whole insect

tribe, because they are farther jointed almost into *sect*ions; it is easily remembered, also, that the projecting joint means strength and elasticity in the creature, and that all its limbs are useful to it, and cannot conveniently be parted with; and that the incised, sectional, or insectile joint means more or less weakness,* and necklace-like laxity or license in the creature's make; and an ignoble power of shaking off its legs or arms on occasion, coupled also with modes of growth involving occasionally quite astonishing transformations, and beginnings of new life under new circumstances; so that, until very lately, no mortal knew what a crab was like in its youth, the very existence of the creature, as well as its legs, being jointed, as it were, and made in separate pieces with the narrowest possible thread of connection between them; and its principal, or stomachic, period of life, connected with its sentimental period by as thin a thread as a wasp's stomach is with its thorax.

Fig. 22

7. Now in plants, as in animals, there are just the same opposed aspects of joint, with this specialty of difference in function, that the animal's limb bends at the joints, but the vegetable limb stiffens. And when the articulation projects as in the joint of a cane, it means not only that the strength of the plant is well carried through the junction, but is carried farther and more safely than it could be without it: a cane is stronger, and can stand higher than it could otherwise, because of its joints. Also, this structure implies that the plant has a will of its own, and a position which on the whole it will keep, however it may now and then be bent out of it; and that it has a continual battle of a healthy and human-like kind, to wage with surrounding elements.

* Not always in muscular power; but the framework on which strong muscles are to act, as that of an insect's wing, or its jaw, is never insectile.

But the crabby, or insect-like, joint, which you get in seaweeds and cacti, means either that the plant is to be dragged and wagged here and there at the will of waves, and to have no spring nor mind of its own; or else that it has at least no springy intention and elasticity of purpose, but only a knobby, knotty, prickly, malignant stubbornness, and incoherent opinionativeness; crawling about, and coggling, and grovelling, and aggregating anyhow, like the minds of so many people whom one knows!

8. Returning then to our grasses, in which the real rooting and junction of the leaves with each other is at these joints; we find that therefore every leaf of grass may be thought of as consisting of two main parts, for which we shall want two separate names. The lowest part, which wraps itself round to become strong, we will call the "staff," and for the free-floating outer part we will take specially the name given at present carelessly to a large number of the plants themselves, "flag." This will give a more clear meaning to the words "rod" (virga), and "staff" (baculus), when they occur together, as in the 23rd Psalm;[1] and remember the distinction is that a rod bends like a switch, but a staff is stiff. I keep the well-known name "blade" for grass-leaves in their fresh green state.

9. You felt, as you were bending down the paper into the form d, Fig. 21, the difficulty and awkwardness of the transition from the tubular form of the staff to the flat one of the flag. The mode in which this change is effected is one of the most interesting features in plants, for you will find presently that the leaf-stalk in ordinary leaves is only a means of accomplishing the same change from round to flat. But you know I said just now that some leaves were not flat, but set upright, edgeways. It is not a common position in two-leaved trees; but if you can run out and look at an arbor vitæ, it may interest you to see its hatchet-shaped vertically crested cluster of leaves transforming themselves

[1] [Verse 4: "Virga tua, et baculus tuus, ipsa me consolata sunt."]

gradually downwards into branches; and in one-leaved trees the vertically edged group is of great importance.

10. Cut out another piece of paper like a in Fig. 21, but now, instead of merely giving it nicks at a, b, cut it into the shape A, Fig. 23. Roll the lower part up as before, but instead of pulling the upper part down, pinch its back at the dotted line, and bring the two points, a and b, forward, so that they may touch each other. B shows the look of the thing half-done, before the points a and b have quite met. Pinch them close, and stitch the two edges neatly together, all the way from a to the point c; then roll and tie up the lower part as before. You will find then that the back or spinal line of the whole leaf is bent forward, as at B. Now go out to the garden and gather the green leaf of a fleur-de-lys, and look at it and your piece of disciplined paper together; and I fancy you will probably find out several things for yourself that I want you to know.

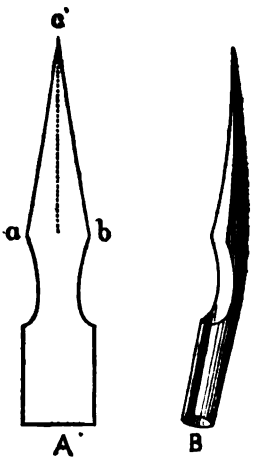


*Fig. 23*

11. You see, for one thing, at once, how *strong* the fleur-de-lys leaf is, and that it is just twice as strong as a blade of grass, for it is the substance of the staff, with its sides flattened together, while the grass blade is a staff cut open and flattened out. And you see that as a grass blade necessarily flaps down, the fleur-de-lys leaf as necessarily curves up, owing to that inevitable bend in its back. And you see, with its keen edge, and long curve, and sharp point, how like a sword it is. The botanists would for once have given a really good and right name to the plants which have this kind of leaf, "Ensatæ," from the Latin "ensis," a sword; if only sata had been properly formed from sis. We can't let the rude Latin stand, but you may remember that the fleur-de-lys, which is the flower of chivalry, has a sword for its leaf, and a lily for its heart.

12. In case you cannot gather a fleur-de-lys leaf, I have drawn for you, in Plate XXII., a cluster of such leaves, which are as pretty as any, and so small that, missing the points of a few, I can draw them of their actual size. You see the pretty alternate interlacing at the bottom, and if you can draw at all, and will try to outline their curves, you will find what subtle lines they are. I did not know this name for the strong-edged grass leaves when I wrote the pieces about shield and sword leaves in *Modern Painters;*[1] I wish I had chanced in those passages on some other similitude, but I can't alter them now, and my trustful pupils may avoid all confusion of thought by putting gladius for ensis, and translating it by the word "scymitar," which is also more accurate in expressing the curvature blade. So we will call the ensatæ, instead, "gladiolæ," translating "scymitar-grasses." And having now got at some clear idea of the distinction between outlaid and inlaid growth in the stem, the reader will find the elementary analysis of forms resulting from outlaid growth in *Modern Painters;* and I mean to republish it in the sequel of this book,[2] but must go on to other matters here. The growth of the inlaid stem we will follow as far as we need, for English plants, in examining the grasses.

FLORENCE, 11*th September*, 1874.

18. As I correct this chapter for press, I find it is too imperfect to be let go without a word or two more. In the first place, I have not enough, in distinguishing the nature of the living yearly shoot, with its cluster of fresh leafage, from that of the accumulated mass of perennial trees, taken notice of the similar power even of the annual shoot, to obtain some manner of immortality for itself, or at least of usefulness, *after* death. A Tuscan woman stopped me on the path up to Fiesole last night, to beg me to buy her plaited straw. I wonder how long straw

[1] [See, in this edition, Vol. VII. p. 23.]

[2] [See, again, Vol. VII. pt. vi. The intended republication was not carried out: see above, p. l. Nor was the discussion of grasses reached in *Proserpina*.]

UNIV. OF
CALIFORNIA

lasts, if one takes care of it? A Leghorn bonnet (if now such things are), carefully put away,—even properly taken care of when it is worn,—how long will it last, young ladies?

I have just been reading the fifth chapter of II. Esdras, and am fain to say, with less discomfort than otherwise I might have felt (the example being set me by the archangel Uriel), "I am not sent to tell thee, for I do not know."[1] How old is the oldest straw known? the oldest linen? the oldest hemp? We have mummy wheat,—cloth of papyrus, which is a kind of straw. The paper reeds by the brooks, the flax-flower in the field, leave such imperishable frame behind them. And Ponte-della-Paglia, in Venice; and Straw Street, of Paris, remembered in Heaven,[2]—there is no occasion to change their names, as one may have to change "Waterloo Bridge," or the "Rue de l'Impératrice." Poor Empress! Had she but known that her true dominion was in the straw streets of her fields; not in the stone streets of her cities![3]

But think how wonderful this imperishableness of the stem of many plants is, even in their annual work: how much more in their perennial work! The noble stability between death and life, of a piece of perfect wood? It cannot grow, but will not decay; keeps record of its years of life, but surrenders them to become a constantly serviceable thing: which may be sailed in, on the sea, built with, on the land, carved by Donatello, painted on by Fra Angelico. And it is not the wood's fault, but the fault of Florence in not taking proper care of it, that the panel of Sandro Botticelli's loveliest picture[4] has cracked (not with heat, I believe, but blighting frost), a quarter of an inch wide through the Madonna's face.

[1] [2 Esdras iv. 1, 52.]

[2] [The Rue de Fouarre. See *Paradiso*, x. 137; another portion of the passage is quoted in *Modern Painters*, vol. iii. (Vol. V. pp. 116–117).]

[3] [For other references to the Franco-German war, and the fall of the Empire, see Vol. XX. p. 199 *n.*]

[4] [Ruskin probably refers to "The Madonna di S. Barnaba" (see Vol. XXIII. p. 273)—a picture which has of late been restored.]

But what is this strange state of undecaying wood? What sort of latent life has it, which it only finally parts with when it rots?

Nay, what is the law by which its natural life is measured? What makes a tree "old"? One sees the Spanish-chestnut trunks among the Apennines growing into caves, instead of logs. Vast hollows, confused among the recessed darknesses of the marble crags, surrounded by mere laths of living stem, each with its coronal of glorious green leaves. Why can't the tree go on, and on,—hollowing itself into a Fairy—no—a Dryad, Ring,—till it becomes a perfect Stonehenge of a tree? Truly, "I am not sent to tell thee, for I do not know."

The worst of it is, however, that I don't know one thing which I ought very thoroughly to have known at least thirty years ago, namely, the true difference in the way of building the trunk in outlaid and inlaid wood. I have an idea that the stem of a palm-tree is only a heap of leaf-roots built up like a tower of bricks, year by year, and that the palm-tree really grows on the top of it, like a bunch of fern; but I've no books here, and no time to read them if I had. If only I were a strong giant, instead of a thin old gentleman of fifty-five, how I should like to pull up one of those little palm-trees by the roots—(by the way, what are the roots of a palm like? and, how does it stand in sand, where it is wanted to stand, mostly? Fancy, not knowing that, at fifty-five!)—that grow all along the Riviera; and snap its stem in two, and cut it down the middle. But I suppose there are sections enough now in our grand botanical collections, and you can find it all out for yourself. That you should be able to ask a question clearly, is two-thirds of the way to getting it answered; and I think this chapter of mine will at least enable you to ask some questions about the stem, though what a stem *is*, truly, "I am not sent to tell thee, for I do not know."

KNARESBOROUGH, *30th April*, 1876.

14. I see by the date of last paragraph that this chapter has been in my good Aylesbury printer's type for more than a year and a half. At this rate, *Proserpina* has a distant chance of being finished in the spirit-land, with more accurate information derived from the archangel Uriel himself (not that he is likely to know much about the matter, if he keeps on letting himself be prevented from ever seeing foliage in spring-time by the black demon-winds), about the year 2000. In the meantime, feeling that perhaps I *am* sent to tell my readers a little more than is above told, I have had recourse to my botanical friend, good Mr. Oliver of Kew,[1] who has taught me, first, of palms, that they actually stitch themselves into the ground, with a long dipping loop, up and down, of the root fibres, concerning which sempstress-work I shall have a month's puzzlement before I can report on it; secondly, that all the increment of tree stem is, by division and multiplication of the cells of the wood, a process not in the least to be described as "sending down roots from the leaf to the ground." I suspected as much in beginning to revise this chapter; but hold to my judgment in not cancelling it. For this multiplication of the cells is at least compelled by an influence which passes from the leaf to the ground, and *vice versâ;* and which is at present best conceivable to me by imagining the continual and invisible descent of lightning from electric cloud by a conducting rod, endowed with the power of softly splitting the rod into two rods, each as thick as the original one. Studying microscopically, we should then see the molecules of copper, as we see the cells of the wood, dividing and increasing, each one of them into two. But the visible result, and mechanical conditions of growth, would still be the same as if the leaf actually sent down a new root fibre; and, more than

[1] [Professor Daniel Oliver, LL.D., F.R.S., for many years Keeper of the Herbarium and Library at Kew. Compare *Fors Clavigera*, Letter 74, § 2.]

this, the currents of accumulating substance, marked by the grain of the wood, are, I think, quite plainly and absolutely those of streams flowing only from the leaves downwards; never from the root up, nor of mere lateral increase. I must look over all my drawings again, and at tree stems again, with more separate study of the bark and pith in those museum sections, before I can assert this; but there will be no real difficulty in the investigation. If the increase of the wood is lateral only, the currents round the knots will be compressed at the sides, and open above and below; but if downwards, compressed above the knot and open below it. The nature of the force itself, and the manner of its ordinances in direction, remain, and must for ever remain, inscrutable as our own passions, in the hand of the God of all Spirits, and of all Flesh.

"Drunk is each ridge, of thy cup drinking,
Each clod relenteth at thy dressing,
Thy cloud-borne waters inly sinking,
Fair spring sproutes forth, blest with thy blessing;
The fertile year is with thy bounty crouned,
And where thou go'st, thy goings fat the ground.

Plenty bedews the desert places,
A hedge of mirth the hills encloseth.
The fields with flockes have hid their faces,
A robe of corn the valleys clotheth.
Deserts and hills and fields and valleys all,
Rejoice, shout, sing, and on thy name do call."[1]

[1] [Sir Philip Sidney's Psalter, Psalm lxv.: see Ruskin's notes on it in *Rock Honeycomb*.]

# CHAPTER X

## THE BARK

1. PHILOLOGISTS are continually collecting instances, like our friend the French critic of Virgil,[1] of the beauty of finished language, or the origin of unfinished, in the imitation of natural sounds. But such collections give an entirely false idea of the real power of language, unless they are balanced by an opponent list of the words which signally fail of any such imitative virtue, and whose sound, if one dwelt upon it, is destructive of their meaning.

2. For instance. Few sounds are more distinct in their kind, or one would think more likely to be vocally reproduced in the word which signified them, than that of a swift rent in strongly woven cloth; and the English words "rag" and ragged, with the Greek ῥήγνυμι, do indeed in a measure recall the tormenting effect upon the ear. But it is curious that the verb which is meant to express the actual origination of rags, should rhyme with two words entirely musical and peaceful—words, indeed, which I always reserve for final resource in passages which I want to be soothing as well as pretty,[2]—"fair," and "air"; while, in its orthography, it is identical with the word representing the bodily sign of tenderest passion, and grouped with a multitude of others,* in which the mere insertion of a consonant

* It is one of the three cadences (the others being of the words rhyming to "mind" and "way") used by Sir Philip Sidney in his marvellous paraphrase of the 55th Psalm.[3]

[1] [For the reference to Diderot, see above, p. 276 *n.*]

[2] [This statement need not, of course, be pressed too literally; but the reader will find examples of "fair" in such a passage at Vol. VII. p. 440, and Vol. VIII. p. 53; and of "air" at Vol. XIII. p. 171, and Vol. XXII. p. 264.]

[3] [See Ruskin's notes on the paraphrase in *Rock Honeycomb*.]

makes such wide difference of sentiment as between "dear" and "drear," or "pear" and "spear." The Greek root, on the other hand, has persisted in retaining some vestige of its excellent dissonance, even where it has parted with the last vestige of the idea it was meant to convey; and when Burns did his best,—and his best was above most men's,—to gather pleasant liquid and labial syllabling round gentle meaning, in

> "Bonnie lassie, will ye go,
> Will ye go, will ye go,
> Bonnie lassie, will ye go,
> To the birks of Aberfeldy?"[1]

he certainly had little thought that the delicately crisp final k, in birk, was the remnant of a magnificent Greek effort to express the rending of the earth by earthquake, in the wars of the giants. In the middle of that word "esmaragēse,"[2] we get our own beggar's "rag" for a pure root, which afterwards, through the Latin frango, softens into our "break," and "bark,"—the "broken thing"; that idea of its rending around the tree's stem having been, in the very earliest human efforts at botanical description, attached to it by the pure Aryan race, watching the strips of rosy satin break from the birch stems, in the Aberfeldys of Imaus.[3]

8. That this tree should have been the only one which "the Aryans, coming as conquerors from the North, were able to recognize"* in Hindostan, and should therefore also be "the only one whose name is common to Sanskrit, and to the languages of Europe," delighted me greatly, for two

* *Lectures on the Families of Speech*, by the Rev. F. W. Farrar. Longmans, 1870. Page 81.

---

[1] [Compare ch. vii. § 12 (above, p. 298), where Ruskin again quotes the line from Burns's song "The Birks of Aberfeldy." Ruskin describes the metre of the song in *Elements of English Prosody*, § 7.]

[2] [Hesiod, *Theogony*, 679 (and again in 693): γῆ δὲ μέγ' ἐσμαράγησεν. Compare *Deucalion*, i. ch. vii. § 32 (V.).]

[3] [Imaus, the Greek for the Himalaya.]

reasons: the first, for its proof that in spite of the development of species, the sweet gleaming of birch stem has never changed its argent and sable for any unchequered heraldry; and the second, that it gave proof of a much more important fact, the keenly accurate observation of Aryan foresters at that early date; for the fact is that the breaking of the thin-beaten silver of the birch trunk is so delicate, and its smoothness so graceful, that until I painted it with care, I was not altogether clear-headed myself about the way in which the chequering was done: nor until Fors to-day brought me to the house of one of my father's friends at Carshalton,[1] and gave me three birch stems to look at just outside the window, did I perceive it to be a primal question about them, what it is that blanches that dainty dress of theirs, or, anticipatorily, weaves. What difference is there between the making of the corky excrescence of other trees, and of this almost transparent fine white linen? I perceive that the older it is, within limits, the finer and whiter; hoary tissue, instead of hoary air—honouring the tree's aged body; the outer sprays have no silvery light on their youth. Does the membrane thin itself into whiteness merely by stretching, or produce an outer film of new substance?*

4. And secondly, this investiture, why is it transverse to the trunk,—swathing it, as it were, in bands? Above all,—when it breaks,—why does it break round the tree instead of down? All other bark breaks as anything would, naturally, round a swelling rod, but this, as if the stem were growing longer; until, indeed, it reaches farthest heroic old age, when the whiteness passes away again, and the

* I only profess, you will please to observe, to ask questions in *Proserpina*. Never to answer any.[2] But of course this chapter is to introduce some further inquiry in another place.[3]

[1] [The diary shows that Ruskin spent the days, April 8–10, 1876, with Mr. Gassiot, at Carshalton.]

[2] [Compare the Introduction, above, p. xliv.]

[3] [See ii. ch. viii. § 11 (p. 509), where, however, the author excuses himself further from the inquiry.]

rending is like that of other trees, downwards. So that, as it were in a changing language, we have the great botanical fact twice taught us, by this tree of Eden, that the skins of trees differ from the skins of the higher animals in that, for the most part, they won't stretch, and must be worn torn.

So that in fact the most popular arrangement of vegetative adult costume is Irish; a normal investiture in honourable rags; and decorousness of tattering, as of a banner borne in splendid ruin through storms of war.

5. Now therefore, if we think of it, we have five distinct orders of investiture for organic creatures; first, mere secretion of mineral substance, chiefly lime, into a hard shell, which, if broken, can only be mended, like china—by sticking it together; secondly, organic substance of armour which grows into its proper shape at once for good and all, and can't be mended at all, if broken (as of insects); thirdly, organic substance of skin, which stretches, as the creature grows, by cracking, over a fresh skin which is supplied beneath it, as in bark of trees; fourthly, organic substance of skin cracked symmetrically into plates or scales which can increase all round their edges, and are connected by softer skin, below, as in fish and reptiles (divided with exquisite lustre and flexibility, in feathers of birds); and lastly, true elastic skin, extended in soft unison with the creature's growth,—blushing with its blood, fading with its fear; breathing with its breath, and guarding its life with sentinel beneficence of pain.

6. It is notable, in this higher and lower range of organic beauty, that the decoration, by pattern and colour, which is almost universal in the protective coverings of the middle ranks of animals, should be reserved in vegetables for the most living part of them, the flower only: and that among animals, few but the malignant and senseless are permitted, in the corrugation of their armour, to resemble the half-dead trunk of the tree, as they float beside it in the tropical river. I must, however, leave the scale patterns of the

palms and other inlaid tropical stems for after-examination, —content, at present, with the general idea of the bark of an outlaid tree as the successive accumulation of the annual protecting film, rent into ravines of slowly increasing depth, and coloured, like the rock, whose stability it begins to emulate, with the grey or gold of clinging lichen and embroidering moss.

# CHAPTER XI

## GENEALOGY

1. RETURNING, after more than a year's sorrowful interval,[1] to my Sicilian fields,—not incognizant, now, of some of the darker realms of Proserpina; and with feebler heart, and, it may be, feebler wits, for wandering in her brighter ones,—I find what I had written[2] by way of sequel to the last chapter, somewhat difficult, and extremely tiresome. Not the less, after giving fair notice of the difficulty, and asking due pardon for the tiresomeness, I am minded to let it stand; trusting to end, with it, once for all, investigations of the kind. But in finishing this first volume of my School Botany, I must try to give the reader some notion of the plan of the book, as it now, during the time for thinking over it which illness left me, has got itself arranged in my mind, within limits of possible execution. And this the rather, because I wish also to state, somewhat more gravely than I have yet done, the grounds on which I venture here to reject many of the received names of plants; and to substitute others for them, relating to entirely different attributes from those on which their present nomenclature is confusedly edified.

I have already in some measure given the reasons for this change;* but I feel that, for the sake of those among my scholars who have laboriously learned the accepted names, I ought now also to explain its method more completely.

* See Introduction, pp. 200–204.

[1] [The part of *Proserpina* containing this chapter appeared in January 1879; the preceding part had appeared in August 1876. Ruskin refers, therefore, not to dates of publication, but to his resumption of work on *Proserpina*—put aside before his illness of 1878, and now again taken up.]

[2] [Namely, a chapter on wood; but there now follows a digression, the subject being next referred to on p. 371, where it is remitted for future discussion. Ultimately it became ch. vii. in vol. ii.: see below, p. 498, where he again calls it "verv tiresome."]

2. I call the present system of nomenclature *confusedly* edified, because it introduces,—without, apparently, any consciousness of the inconsistency, and certainly with no apology for it,—names founded sometimes on the history of plants, sometimes on their qualities, sometimes on their forms, sometimes on their products, and sometimes on their poetical associations.

On their history—as "Gentian" from King Gentius, and "Funkia" from Dr. Funk.[1]

On their qualities—as "Scrophularia" from its (quite uncertified) use in scrofula.

On their forms—as the "Caryophylls" from having petals like husks of nuts.[2]

On their products—as "Cocos nucifera" from its nuts.

And on their poetical associations,—as the "Star of Bethlehem" from its imagined resemblance to the light of that seen by the Magi.

3. Now, this variety of grounds for nomenclature might patiently, and even with advantage, be permitted, provided the grounds themselves were separately firm, and the inconsistency of method advisedly allowed, and, in each case, justified. If the histories of King Gentius and Dr. Funk are indeed important branches of human knowledge;—if the Scrophulariaceæ do indeed cure King's Evil;—if pinks be best described in their likeness to nuts;—and the Star of Bethlehem verily remind us of Christ's Nativity,—by all means let these and other such names be evermore retained. But if Dr. Funk be not a person in any special manner needing either stellification or florification; if neither herb nor flower can avail, more than the touch of monarchs, against hereditary pain; if it be no better account of a pink to say it is nut-leaved, than of a nut to say it is pink-leaved; and if the modern mind, incurious respecting the journeys of wise men, has already confused, in its Bradshaw's Bible, the station of Bethlehem with that of

[1] [See above, for "Gentian," p. 314 *n.*; and for "Funkia," p. 203 *n.*]
[2] [See above, p. 314.]

Bethel,* it is certainly time to take some order with the partly false, partly useless, and partly forgotten literature of the Fields; and, before we bow our children's memories to the burden of it, ensure that there shall be matter worth carriage in the load.

4. And farther, in attempting such a change, we must be clear in our own minds whether we wish our nomenclature to tell us something about the plant itself, or only to tell us the place it holds in relation to other plants: as, for instance, in the Herb-Robert, would it be well to christen it, shortly, "Rob Roy," because it is pre-eminently red, and so have done with it;—or rather to dwell on its family connections, and call it "Macgregoraceous"?

5. Before we can wisely decide this point, we must resolve whether our botany is intended mainly to be useful to the vulgar, or satisfactory to the scientific élite. For if we give names characterizing individuals, the circle of plants which any country possesses may be easily made known to the children who live in it: but if we give names founded on the connection between these and others at the Antipodes, the parish schoolmaster will certainly have double work; and it may be doubted greatly whether the parish schoolboy, at the end of the lecture, will have half as many ideas.

6. Nevertheless, when the features of any great order of plants are constant, and, on the whole, represented with great clearness both in cold and warm climates, it may be desirable to express this their citizenship of the world in definite nomenclature. But my own method, so far as hitherto developed, consists essentially in fastening the thoughts of the pupil on the special character of the plant, in the place where he is likely to see it; and therefore, in expressing the power of its race and order in the wider world, rather by reference to mythological associations than to botanical structure.

* See Sowerby's nomenclature of the flower, vol. ix., Plate 1703.[1]

[1] ["Spiked Star-of-Bethel" in the third edition, 1863 (vol. ix., Plate 1525), but obviously a misprint, as in the text opposite (p. 197) it is correctly described as "Spiked Star-of-Bethlehem."]

UNIV. OF
CALIFORNIA

UNIV. OF CALIFORNIA

Drawn by J. Hoskins. Engraved by G. Allen.

**CONTORTA PURPUREA.**

**PURPLE WREATH-WORT.**

7. For instance, Plate XXIII. represents, of its real size, an ordinary spring flower in our English mountain fields.[1] It is an average example,—not one of rare size under rare conditions,—rather smaller than the average, indeed, that I might get it well into my plate. It is one of the flowers whose names I think good to change; but I look carefully through the existing titles belonging to it and its fellows, that I may keep all I expediently can. I find, in the first place, that Linnæus called one group of its relations, Ophryds, from Ophrys,[2]—Greek for the eyebrow,—on account of their resemblance to the brow of an animal frowning, or to the overshadowing casque of a helmet. I perceive this to be really a very general aspect of the flower; and therefore, no less than in respect to Linnæus, I adopt this for the total name of the order, and call them "Ophrydæ," or, shortly, "Ophryds."

8. Secondly: so far as I know these flowers myself, I perceive them to fall practically into three divisions,—one, growing in English meadows and Alpine pastures, and always adding to their beauty; another, growing in all sorts of places, very ugly itself, and adding to the ugliness of its indiscriminated haunts; and a third, growing mostly up in the air, with as little root as possible, and of gracefully fantastic forms, such as this kind of nativity and habitation might presuppose. For the present, I am satisfied to give names to these three groups only. There may be plenty of others which I do not know, and which other people may name, according to their knowledge. But in all these three kinds known to me, I perceive one constant characteristic to be *some* manner of *distortion;* and I desire that fact,—marking a spiritual (in my sense of the word[3]) character of

[1] [The marsh orchis. This is presumably the drawing of which Ruskin says in *Fors Clavigera* (Letter 66, § 20) that he has been "two whole days at work on the purple marsh orchis alone." He there proposed to call it "Porphyria Veris," "Spring Purplet." For another reference to it, see below, p. 546.]

[2] [Compare *Laws of Fésole*, ch. vii. § 29 (Vol. XV. p. 429).]

[3] [For the "sense of the word" to Ruskin, who found spiritual distinctions in species, see *Queen of the Air*, §§ 62, 63 (Vol. XIX. pp. 358–359; and *Fors Clavigera*, Letter 70, § 8 (III.).]

extreme mystery,—to be the first enforced on the mind of the young learner. It is exhibited to the English child, primarily, in the form of the stalk of each flower, attaching it to the central virga. This stalk is always twisted once and a half round, as if somebody had been trying to wring the blossom off; and the name of the family, in *Proserpina*, will therefore be "Contorta"* in Latin, and "Wreathe-wort" in English.

Farther: the beautiful power of the one I have drawn in its spring life, is in the opposition of its dark purple to the primrose in England, and the pale yellow anemone in the Alps. And its individual name will be, therefore, "Contorta purpurea"—*Purple* Wreathe-wort.

And in drawing it, I take care to dwell on the strength of its colour, and to show thoroughly that it is a *dark* blossom,† before I trouble myself about its minor characters.

9. The second group of this kind of flowers live, as I said, in all sorts of places; but mostly, I think, in disagreeable ones,—torn and irregular ground, under alternations of unwholesome heat and shade, and among swarms of nasty insects. I cannot yet venture on any bold general statement about them, but I think that is mostly their way; and at all events, they themselves are in the habit of dressing in livid and unpleasant colours; and are distinguished from all other flowers by twisting, not only their stalks, but one of their petals, not once and a half only, but two or three times round, and putting it far out at the same time, as a foul jester would put out his tongue: while also the singular power of grotesque mimicry, which, though strong also in the other groups of their race, seems in the others more or

* Linnæus used this term for the Oleanders;[1] but evidently with less accuracy than usual.

† "ἄνθη πορφυροειδῆ," says Dioscorides, of the race generally,—but "ἄνθη δὲ ὑποπόρφυρα" of this particular one.[2]

[1] [See pp. 433–439 in vol. ii. part i. of his *Systema Naturæ*, edited by J. F. Gmelin, Leipsig, 1791.]

[2] [Book iii. chaps. cxxxi., cxxxii. "This particular one" is called by Dioscorides ὄρχις ἕτερος (orchis altera); its identity has been much discussed. See C. G. Kühn's edition of *Medicorum Græcorum Opera quæ exstant*, vol. xxvi. p. 553.]

less playful, is, in these, definitely degraded, and, in aspect, malicious.

10. Now I find the Latin name "Satyrium" attached already to one sort of these flowers;[1] and we cannot possibly have a better one for all of them. It is true that, in its first Greek form, Dioscorides attaches it to a white, not a livid, flower;[2] and I dare say there are some white ones of the breed: but, in its full sense, the term is exactly right for the entire group of ugly blossoms of which the characteristic is the spiral curve and protraction of their central petal: and every other form of Satyric ugliness which I find among the Ophryds, whatever its colour, will be grouped with them. And I make them central, because this humour runs through the whole order, and is, indeed, their distinguishing sign.

11. Then the third group, living actually in the air, and only holding fast by, without nourishing itself from, the ground, rock, or tree-trunk on which it is rooted, may of course most naturally and accurately be called "Aeria," as it has long been popularly known in English by the name of Air-plant.

Thus we have one general name for all these creatures, "Ophryd"; and three family or group names, Contorta, Satyrium, and Aeria,—every one of these titles containing as much accurate fact about the thing named as I can possibly get packed into their syllables: and I will trouble

[1] [The flower is mentioned in one of Ruskin's note-books:—

"Satyrion Pallidum: Habenaria Chorantha (Sowerby), Orchis à deux feuilles (French). . . . The lappet becomes the uppermost leaf; the two lateral ones close like horns on each side of the casque, which unites itself into a firm shell-like grotto, throwing out a hard tongue in front (the representative of the central lobe of the gorget), and a quite monstrous spur, curbed downwards, behind; on each side, between the spur and tongue, is thrown out (the lateral lobe of gorget) a large thin petal, whence the 'deux feuilles' of the French, and 'Butterfly Orchis' of English, nomenclature. The spur is hollow and empty to near the end, the hollow being visible through its transparent substance as a whitish tube more or less wrinkled in surface. The whole cluster of flowers a confused and straggling crowd: the protruded tongues utterly foolish-looking and ugly. Scent agreeable enough. June 25, in flower at Brantwood."

For the terms "casque" and "gorget," see below, p. 546.]

[2] [For σατύριον, see Dioscorides, iii. 143; p. 210 of the Basle edition of 1529.]

my young readers with no more divisions of the order. And if their parents, tutors, or governors, after this fair warning, choose to make them learn, instead, the seventy-seven different names with which botanist-heraldries have beautifully ennobled the family,—all I can say is, let them at least begin by learning them themselves. They will be found in due order in pages 1084, 1085 of *Loudon's Cyclopædia.**

12. But now, farther: the student will observe that the name of the total order is Greek; while the three family ones are Latin, although the central one is originally Greek also.

I adopt this as far as possible for a law through my whole plant nomenclature.

13. Farther: the terminations of the Latin family names will be, for the most part, of the masculine, feminine, and neuter forms, us, a, um, with these following attached conditions.

(I.) Those terminating in "us," though often of feminine words, as the central Arbor, will indicate either real masculine strength (quercus, laurus), or conditions of dominant majesty (cedrus), of stubbornness and enduring force (crataegus), or of peasant-like commonalty and hardship (juncus); softened, as it may sometimes happen, into gentleness and beneficence (thymus). The occasional forms in "er" and "il" will have similar power (acer, basil).

(II.) Names with the feminine termination "a," if they are real names of girls, will always mean flowers that are perfectly pretty and perfectly good (Lucia, Viola, Margarita, Clarissa). Names terminating in "a" which are not also accepted names of girls, may sometimes be none the less

* I offer a sample of two dozen for good papas and mammas to begin with:—

| | | | |
|---|---|---|---|
| Angraecum. | Corallorrhiza. | Ornithidium. | Prescotia. |
| Anisopetalum. | Cryptarrhena. | Ornithocephalus. | Renanthera. |
| Brassavola. | Eulophia. | Platanthera. | Rodriguezia. |
| Brassia. | Gymnadenia. | Pleurothallis. | Stenorhyncus. |
| Caelogyne. | Microstylis. | Pogonia. | Trizeuxis. |
| Calopogon. | Octomeria. | Polystachya. | Xylobium. |

honourable (Primula, Campanula), but for the most part will signify either plants that are only good and worthy in a nursy sort of way (Salvia), or that are good without being pretty (Lavandula), or pretty without being good (Kalmia). But no name terminating in "a" will be attached to a plant that is neither good nor pretty.

(III.) The neuter names terminating in "um" will always indicate some power either of active or suggestive evil (Conium, Solanum, Satyrium), or a relation, more or less definite, to death; but this relation to death may sometimes be noble, or pathetic,—"which to-day is, and to-morrow is cast into the oven,"[1]—Lilium.

But the leading position of the neuters in the plant's double name must be noticed by students unacquainted with Latin, in order to distinguish them from plural genitives, which will always, of course, be the second word (Francesca Fontium, Francesca of the Springs).

14. Names terminating in "is" and "e," if definitely names of women (Iris, Amaryllis, Alcestis, Daphne), will always signify flowers of great beauty, and noble historic association. If not definitely names of women, they will yet indicate some speciality of sensitiveness, or association with legend (Berberis, Clematis[2]). No neuters in "e" will be admitted.

15. Participial terminations (Impatiens), with neuters in "en" (Cyclamen), will always be descriptive of some special quality or form,[3]—leaving it indeterminate if good or bad, until explained. It will be manifestly impossible to limit either these neuters or the feminines in "is" to Latin forms; but we shall always know by their termination that they cannot be generic names, if we are strict in forming these last on a given method.

16. How little method there is in our present formation

[1] [Matthew vi. 30.]

[2] [The berberis is named as an instance of sensitiveness, the stamens being irritable, springing forward when touched at the base; the clematis, of association and popular fancies, as in Scott's *Lady of the Lake* (i. 26): "The clematis, the favour'd flower, which boasts the name of virgin-bower."]

[3] [For the character of the cyclamen, see below, pp. 529, 540.]

of them, I am myself more and more surprised as I consider. A child is shown a rose, and told that he is to call every flower like that, "Rosaceous";* he is next shown a lily, and told that he is to call every flower like that, "Liliaceous";—so far well; but he is next shown a daisy, and is not at all allowed to call every flower like that, "Daisaceous," but he must call it, like the fifth order of architecture, "Composite";[1] and being next shown a pink, he is not allowed to call other pinks "Pinkaceous," but "Nut-leaved";[2] and being next shown a pease-blossom, he is not allowed to call other pease-blossoms "Peasaceous," but, in a brilliant burst of botanical imagination, he is incited to call it by two names instead of one, "Butterfly-aceous" from its flower, and "Pod-aceous" from its seed;[3] —the inconsistency of the terms thus enforced upon him being perfected in their inaccuracy, for a daisy is not one whit more composite than Queen of the Meadow,[4] or Jura Jacinth;† and "legumen" is not Latin for a pod, but "siliqua,"—so that no good scholar could remember Virgil's "siliqua quassante legumen,"[5] without overthrowing all his Pisan nomenclature.[6]

* Compare Chapter v., § 7 [p. 271].

† "Jacinthus Jurae," changed from "Hyacinthus Comosus."[7]

---

[1] [On the orders of architecture (which Ruskin reduces to two) and on the term "composite," see *Stones of Venice*, vol. i. (Vol. IX. pp. 35, 426).]

[2] [For the order "Caryophyllaceæ," see above, p. 318.]

[3] [The tribe called *leguminous* or *papilionaceous:* for the latter term, see above, p. 314.]

[4] [More commonly known perhaps as Meadow-sweet (Order, Rosaceæ).]

[5] [*Georgics*, i. 74; quoted also in Vol. XIX. p. 368.]

[6] [The use of "Pisan" for the Latin nomenclature of botanists is obscure, and these last four lines of § 16 do not appear in the MS. It seems not improbable that "Pisan" should be "Paduan." At Padua the first Botanic Garden was established by the Venetian Senate in 1543, and there the celebrated Prospero Alpini professed in 1545; his botanical researches were the foundation of the system of Linnæus. At Padua, too, Andreas Cæsalpinus—called by Linnæus *primus verus systematicus*—was Professor, in whose work *De Plantis* (1583) there was a classification of the 1520 plants then known into fifteen classes. In *Fors Clavigera*, Letter 19, §§ 12, 13, Ruskin refers to later botanical studies at Padua, in which "the professors of botany . . . pursued it only as a science of things to be *named*." The Botanic Garden of Pisa was the second to be established.]

[7] [See "Notes on the Educational Series," No. 23 (Vol. XXI. p. 116), where Ruskin explains why he changes the name "Hairy Hyacinth" to "Hyacinth of Jura."]

17. Farther. If we ground our names of the higher orders on the distinctive characters of *form* in plants, these are so many, and so subtle, that we are at once involved in more investigations than a young learner has ever time to follow successfully, and they must be at all times liable to dislocations and rearrangements on the discovery of any new link in the infinitely entangled chain. But if we found our higher nomenclature at once on historic fact, and relative conditions of climate and character, rather than of form, we may at once distribute our flora into unalterable groups, to which we may add at our pleasure, but which will never need disturbance; far less, reconstruction.

18. For instance,—and to begin,—it is an historical fact that for many centuries the English nation believed that the Founder of its religion, spiritually, by the mouth of the King who spake of all herbs, had likened Himself to two flowers,—the Rose of Sharon, and Lily of the Valley.[1] The fact of this belief is one of the most important in the history of England,—that is to say, of the mind or heart of England: and it is connected solemnly with the heart of Italy also, by the closing cantos of the *Paradiso*.[2]

I think it well therefore that our two first generic, or at least commandant, names heading the out-laid and in-laid divisions of plants,[3] should be of the rose and lily, with such meaning in them as may remind us of this fact in the history of human mind.

It is also historical that the personal appearing of this Master of our religion was spoken of by our chief religious teacher in these terms: "The Grace of God, that bringeth salvation, hath appeared unto all men." And it is a constant fact that this "grace" or "favour" of God is spoken of as "giving us to eat of the Tree of Life."[4]

19. Now, comparing the botanical facts I have to express,

[1] [Song of Solomon ii. 1.]

[2] [The reference is to the Celestial Rose in the Empyrean, in the petals of which are seated the elect (*Paradiso*, xxx.-xxxii.). Compare Vol. XX. p. 246.]

[3] [See above, p. 321.]

[4] [St. Paul's Epistle to Titus, ii. 11; Revelation ii. 7.]

"Clarissa Regina," "Clarissa the Queen" (Mountain Pink);[1] "Lucia Regina," "Lucy the Queen" (Spring Gentian), or in simpler English, "Lucy of Teesdale,"[2] as "Harry of Monmouth." The ruling flowers of groups which bear names not yet accepted for names of girls, will be called simply "Domina," or shortly "Donna." "Rubra domina" (wild raspberry): the wild strawberry, because of her use in heraldry, will bear a name of her own, exceptional, "Cora coronalis."[3]

26. These main points being understood, and concessions made, we may first arrange the greater orders of land plants in a group of twelve, easily remembered, and with very little forcing. There must be *some* forcing always to get things into quite easily tenable form, for Nature always has her ins and outs. But it is curious how fitly and frequently the number of twelve may be used for memoria technica; and in this instance the Greek derivative names fall at once into harmony with the most beautiful parts of Greek mythology, leading on to early Christian tradition.

27. Their series will be, therefore, as follows; the principal subordinate groups being at once placed under each of the great ones. The reasons for occasional appearance of inconsistency will be afterwards explained,[4] and the English and French forms given in each case are the terms which would be used in answering the rapid question, "Of what order is this flower?" the answer being, It is a "Cyllenid," a "Pleiad," or a "Vestal," as one would answer of a person, he is a Knight of St. John or Monk of St. Benedict; while to the question, of what gens? we answer, a Stella or an Erica, as one would answer for a person, a Stuart or Plantagenet.

[1] [For "Clarissa," see above, p. 313, and *Laws of Fésole*, ch. vii. §§ 12, 14, and ch. x. § 33 (Vol. XV. pp. 421, 422, 480).]

[2] [Compare above, p. 285.]

[3] [For this dedication of the strawberry to Demeter, however, not to her daughter Proserpine (Cora), see Vol. XXI. pp. xliv., 111–112.]

[4] [As, for instance, on p. 355, where the adoption of the Latin form "Vestales" is explained.]

I. CHARITES.
ENG. CHARIS. FR. RHODIADE.
Rosa. Persica. Pomum. Rubra. Fragaria.

II. URANIDES.
ENG. URANID. FR. URANIDE.
Lucia. Campanula. Convoluta.

III. CYLLENIDES.
ENG. CYLLENID. FR. NEPHELIDE.
Stella. Francesca. Primula.

IV. OREIADES.
ENG. OREIAD. FR. OREADE.
Erica. Myrtilla. Aurora.

V. PLEIADES.
ENG. PLEIAD. FR. PLEIADE.
Silvia. Anemone.

VI. ARTEMIDES.
ENG. ARTEMID. FR. ARTEMIDE.
Clarissa. Lychnis. Scintilla. Mica.

VII. VESTALES.
ENG. VESTAL. FR. VESTALE.
Mentha. Melitta. Basil. Salvia. Lavandula.
Thymus.

VIII. CYTHERIDES.
ENG. CYTHERID. FR. CYTHERIDE.
Viola. Veronica. Giulietta.

IX. HELIADES.
ENG. ALCESTID. FR. HELIADE.
Clytia. Margarita. Alcestis. Falconia. Carduus.

X. DELPHIDES.
ENG. DELPHID. FR. DELPHIDE.
Laurus. Granata. Myrtus.

XI. HESPERIDES.
ENG. HESPERID. FR. HESPERIDE.
Aurantia. Aegle.

XII. ATHENAIDES.
ENG. ATHENAID. FR. ATHENAIDE.
Olea. Fraxinus.

I will shortly note the changes of name in their twelve orders, and the reasons for them.

I. CHARITES.—The only change made in the nomenclature of this order[1] is the slight one of "rubra" for "rubus": partly to express true sisterhood with the other Charites; partly to enforce the idea of redness, as characteristic of the race, both in the lovely purple and russet of their winter leafage, and in the exquisite bloom of scarlet on the stems in strong young shoots. They have every right to be placed among the Charites, first because the raspberry is really a more important fruit in domestic economy than the strawberry; and, secondly, because the wild bramble[2] is often in its wandering sprays even more graceful than the rose; and in blossom and fruit the best autumnal gift that English Nature has appointed for her village children.

II. URANIDES.[3]—Not merely because they are all of the colour of the sky, but also sacred to Urania in their divine purity. "Convoluta" instead of "convolvulus," chiefly for the sake of euphony; but also because Pervinca is to be included in this group.

III. CYLLENIDES.[4]—Named from Mount Cyllene in Arcadia, because the three races included in the order alike delight in rocky ground, and in the cold or moist air of mountain-clouds.

IV. OREIADES.[5]—Described in next chapter.

V. PLEIADES.[6]—From the habit of the flowers belonging to this order to get into bright local clusters. Silvia, for

[1] [The botanical order of *Rosaceæ*.]

[2] [See the study of Bramble Leaf, Plate XLVIII. in Vol. XXI. (p. 232).]

[3] [This order includes the bell gentian (Lucia), of the botanical order "Gentianeæ"; the campanula ("Campanulaceæ"); the convolvulus ("Convolvulaceæ"); and the periwinkle (Pervinca), of the botanical order, "Apocynaceæ." For the periwinkle, see below, p. 363; for Venus Urania, Vol. XX. p. 336.]

[4] [For Mount Cyllene, see above, p. 243. The order includes the houseleek (Stella), of the botanical order Crassulaceæ; the rockfoils (Francesca), of the botanical order Saxifrageæ; and the primulas ("Primulaceæ").]

[5] [The order corresponds roughly to the botanical order Ericaceæ; including the heaths, the whortleberries (Myrtilla), and the azaleas, rhododendrons, etc. (Aurora).]

[6] [The order includes the wood-sorrel (Oxalis acetosella), of the order "Geraniaceæ"; and the anemone ("Ranunculaceæ").]

the wood-sorrel, will I hope be an acceptable change to my girl-readers.[1]

VI. ARTEMIDES.[2]—Dedicate to Artemis for their expression of energy, no less than purity. This character was rightly felt in them by whoever gave the name "Dianthus" to their leading race; a name which I should have retained if it had not been bad Greek.[3] I wish them, by their name "Clarissa," to recall the memory of St. Clare, as "Francesca" that of St. Francis.* The "issa," not without honour to the greatest of our English moral story-tellers,[4] is added for the practical reason, that I think the sound will fasten in the minds of children the essential characteristic of the race, the cutting of the outer edge of the petal as if with scissors.

VII. VESTALES.[5]—I allow this Latin form, because Hestiades would have been confused with Heliades. The order

* The four races of this order are more naturally distinct than botanists have recognized. In Clarissa, the petal is cloven into a fringe at the outer edge; in Lychnis, the petal is terminated in two rounded lobes, and the fringe withdrawn to the top of the limb; in Scintilla, the petal is divided into two *sharp* lobes, without any fringe of the limb; and in Mica, the minute and scarcely visible flowers have simple and far separate petals. The confusion of these four great natural races under the vulgar or accidental botanical names of spittle-plant, shore-plant, sand-plant, etc., has become entirely intolerable by any rational student; but the names "Scintilla," substituted for Stellaria,[6] and "Mica" for the utterly ridiculous and probably untrue Sagina, connect themselves naturally with Lychnis, in expression of the luminous power of the white and sparkling blossoms.

---

[1] ["Who is Silvia? what is she, That all our swains commend her?" (*Two Gentlemen of Verona*, Act iv. sc. 2). For a study of wood-sorrel, see Plate II. (p. xxxviii.).]

[2] [Corresponding to the botanical order of Caryophyllæ; Clarissa, as already explained, being Ruskin's name for the Pinks; Lychnis (named from the gem of a luminous colour) retains its name; Scintilla is substituted for the genus Stellaria; and Mica for Sagina (pearlwort), which is so called from *sagino*, to fatten.]

[3] [See *Fors Clavigera*, Letter 74, §§ 2, 5; at the time of writing that letter (1877) Ruskin intended to keep the name dianthus.]

[4] [Ruskin at this time, then, must have read Richardson's *Clarissa:* see Vol. V. p. 373 and *n.*]

[5] [On this order see vol. ii. ch. vi. § 15, and ch. ix. § 2 (below, pp. 479, 513). The order corresponds to the botanical "Labiatæ."]

[6] [Compare (in a later volume of this edition) the letter of November 26, 1878, from *Hortus Inclusus*, where Ruskin explains that "Scintilla" is changed from "Stellaria," "because I want Stella for the houseleeks": see above, p. 315. For further notes on his name "Mica," see a later letter from *Hortus*.]

is named "of the hearth," from its manifold domestic use, and modest blossoming.

VIII. CYTHERIDES.[1]—Dedicate to Venus, but in all purity and peace of thought. Giulietta, for the coarse, and more than ordinarily false,[2] Polygala.

IX. HELIADES.[3]—The sun-flowers.* In English, Alcestid, in honour to Chaucer and the Daisy.[4]

X. DELPHIDES.—Sacred to Apollo. Granata, changed from Punica,[5] in honour to Granada and the Moors.

XI. HESPERIDES.—Already a name given to the order.[6] Aegle, prettier and more classic than Limonia, includes the idea of brightness in the blossom.

XII. ATHENAIDES.—I take Fraxinus into this group, because the mountain ash, in its hawthorn-scented flower, scarletest of berries, and exquisitely formed and finished leafage, belongs wholly to the floral decoration of our native rocks, and is associated with their human interests, though lightly, not less spiritually, than the olive with the mind of Greece.[7]

* Clytia will include all the true sun-flowers, and Falconia the hawkweeds; but I have not yet completed the analysis of this vast and complex order, so as to determine the limits of Margarita and Alcestis.

---

[1] [Here Ruskin groups together three botanical orders—the "Violaceæ," the "Polygaleæ," and "Scrophularineæ" (Veronica). He subsequently adds the butterworts ("Lentibularineæ") to his Cytherides: see vol. ii. ch. ii. § 14 (below, p. 433).]

[2] [See, however, ii. ch. iv. § 18, p. 462.]

[3] [This group corresponds roughly to the botanical order of *Compositæ*, including the sunflowers (Clytia), the daisies (Margarita), the hawkweeds (Falconia), and the thistles (Carduus). From a note elsewhere in his MSS. it appears that "Alcestis" was to be his name for Lion's Foot, of which the Alpine variety is familiar to Swiss travellers as edelweiss.]

[4] [The reference is to the *Legende of Goode Women*, and

> "The gret goodnesse of the quene Alceste,
> That turned was into a dayesye."

And compare above, p. 292 *n.*]

[5] [*Punica granatum* = the pomegranate.]

[6] [The name Hesperides was used by Linnæus and other botanists on an identification of the oranges and lemons, etc., with the golden apples of the Greek myth. Compare Ruskin's name "The Hesperid Æglé" in *Modern Painters*, vol. v. (Vol. VII. p. 409, and Plate 79).]

[7] [In the MS. Ruskin added Ficus to Olea and Fraxinus, adding:—

> "I must at once deprecate the just displeasure of botanists for the only piece of real 'forcing' in this system—the placing the Fig tree with the Olive. But this is simply an historical association, and both in the

28. The remaining groups are in great part natural; but I separate for subsequent study five orders of supreme domestic utility, the Mallows, Currants, Pease,* Cresses, and Cranesbills, from those which, either in fruit or blossom, are for finer pleasure or higher beauty. I think it will be generally interesting for children to learn those five names as an easy lesson, and gradually discover, wondering, the world that they include. I will give their terminology at length, separately.[1]

29. One cannot, in all groups, have all the divisions of equal importance; the Mallows are only placed with the other four for their great value in decoration of cottage gardens in autumn: and their softly healing qualities as a tribe. They will mentally connect the whole useful group with the three great ÆSCULAPIADÆ, Cinchona, Coffea, and Camellia.

30. Taking next the water-plants, crowned in the DROSIDÆ, which include the five great families, Juncus, Jacinthus, Amaryllis, Iris, and Lilium, and are masculine in their Greek name because their two first groups, Juncus and Jacinthus, are masculine, I gather together the three orders of—TRITONIDES, which are notably trefoil; the NAIADES, notably quatrefoil, but for which I keep their present pretty name; and the BATRACHIDES,† notably cinqfoil, for which I keep their present ugly one, only changing it from Latin[2] into Greek.

31. I am not sure of being forgiven so readily for putting

* The reader must observe that the positions given in this more developed system to any flower do not interfere with arrangements either formerly or hereafter given for memoria technica. The name of the pea, for instance (alata), is to be learned first among the twelve cinqfoils, p. 313, above; then transferred to its botanical place.

† The amphibious habit of this race is to me of more importance than its outlaid structure.

---

importance of these two trees in Attica, and in their relations to Christian tradition and history, they are, I think, to be placed together in the heart and memory."]

[1] [This, however, was not done.]

[2] [Ranunculaceæ (from *rana*, frog), which Ruskin changes into Batrachides (from βάτραχος).]

the Grasses, Sedges, Mosses, and Lichens together, under the great general head of DEMETRIDÆ. But it seems to me the mosses and lichens belong no less definitely to Demeter, in being the first gatherers of earth on rock, and the first coverers of its sterile surface, than the grass which at last prepares it to the foot and to the food of man. And with the mosses I shall take all the especially moss-plants which otherwise are homeless or companionless,—Drosera, and the like,—and as a connecting link with the flowers belonging to the Dark Kora, the two strange orders of the OPHRYDS and AGARICS.

32. Lastly will come the orders of flowers which may be thought of as belonging for the most part to the Dark Kora of the lower world,—having at least the power of death, if not its terror, given them, together with offices of comfort and healing in sleep, or of strengthening, if not too prolonged, action on the nervous power of life. Of these, the first will be the DIONYSIDÆ,—Hedera, Vitis, Liana; then the DRACONIDÆ,—Atropa,[1] Digitalis, Linaria; and, lastly, the MOIRIDÆ,—Conium, Papaver, Solanum, Arum, and Nerium.[2]

33. As I see this scheme now drawn out, simple as it is, the scope of it seems not only far too great for adequate completion by my own labour, but larger than the time likely to be given to botany by average scholars would

[1] [This belongs, however, to the next class: see ii. ch. vi. § 6, p. 475. On the Draconidæ, compare *Deucalion*, ii. ch. i. § 32; and *Queen of the Air*, § 86 (Vol. XIX. p. 376).]

[2] [It thus appears that Ruskin intended to supplement his first list of Twelve Orders, as follows:—

13. Mallows; 14. Currants; 15. Pease; 16. Cresses; 17. Cranesbills; 18. Æsculapiadæ (cinchona, coffea, camellia); 19. Drosidæ (Juncus, Jacinthus, Amaryllis, Iris, Lily); 20. Tritonides; 21. Naiades (corresponding to the Naiadaceæ, an order composed of various marsh herbs); 22. Batrachides (corresponding to Ranunculaceæ); 23. Demetridæ (grasses, sedges, mosses, lichens, sundew or drosera); 24. Ophryds, see p. 341 (plants of the Orchid Order, divided by Ruskin into Contorta, Satyrium, Aeria); 25. Agarics; 26. Dionysidæ (ivy, vine, and Liana, which latter name Ruskin seems to take from the French *Liane*, a tropical climber or bindweed; 27. Draconidæ (dwale, fox-glove, linaria); 28. Moiridæ (hemlock, poppy, nightshade, cuckoo-pint, and oleander).]

Compare the scheme for Twenty-five Orders in a letter from *Hortus Inclusus*, reprinted in a later volume of this edition.]

enable them intelligently to grasp: and yet it includes, I suppose, not the tenth part of the varieties of plants respecting which, in competitive examination, a student of physical science is now expected to know, or at least assert on hearsay, *something*.

So far as I have influence with the young, myself, I would pray them to be assured that it is better to know the habits of one plant than the names of a thousand; and wiser to be happily familiar with those that grow in the nearest field, than arduously cognisant of all that plume the isles of the Pacific, or illumine the Mountains of the Moon.

Nevertheless, I believe that when once the general form of this system in *Proserpina* has been well learned, much other knowledge may be easily attached to it, or sheltered under the eaves of it: and in its own development, I believe everything may be included that the student will find useful, or may wisely desire to investigate, of properly European botany. But I am convinced that the best results of his study will be reached by a resolved adherence to extreme simplicity of primal idea, and primal nomenclature.

**34.** I do not think the need of revisal of our present scientific classification could be more clearly demonstrated than by the fact that laurels and roses are confused, even by Dr. Lindley, in the mind of his feminine readers;[1] the English word laurel, in the index to his first volume of *Ladies' Botany*, referring them to the cherries, under which the common laurel is placed as "Prunus Laurocerasus," while the true laurel, "Laurus nobilis," must be found in the index of the second volume, under the Latin form "Laurus."

This accident, however, illustrates another, and a most important point to be remembered, in all arrangements whether of plants, minerals, or animals. No single classification can possibly be perfect, or anything *like* perfect.

[1] [See above, p. 272. Ruskin's references to the book are to vol. i. p. 118, and vol. ii. p. 154.]

It must be, at its best, a ground, or *warp* of arrangement only, through which, or over which, the cross threads of another,—yes, and of many others,—must be woven in our minds. Thus the almond, though in the form and colour of its flower, and method of its fruit, rightly associated with the roses, yet by the richness and sweetness of its kernel must be held mentally connected with all plants that bear nuts. These assuredly must have something in their structure common, justifying their being gathered into a conceived or conceivable group of "Nuciferæ," in which the almond, hazel, walnut, cocoa-nut, and such others would be considered as having relationship, at least in their power of secreting a crisp and sweet substance which is not wood, nor bark, nor pulp, nor seed-pabulum reducible to softness by boiling;—but a quite separate substance, for which I do not know that there at present exists any botanical name, —of which, hitherto, I find no general account, and can only myself give so much, on reflection, as that it is crisp and close in texture, and always contains some kind of oil or milk.

35. Again, suppose the arrangement of plants could, with respect to their flowers and fruits, be made approximately complete, they must instantly be broken and reformed by comparison of their stems and leaves. The three *creeping* families of the Charites,—Rosa, Rubra, and Fragaria,—must then be frankly separated from the elastic Persica and knotty Pomum; of which one wild and lovely species, the hawthorn, is no less notable for the massive accumulation of wood in the stubborn stem of it, than the wild rose for her lovely power of wreathing her garlands at pleasure wherever they are fairest, the stem following them and sustaining, where they will.

36. Thus, as we examine successively each part of any plant, new sisterhoods, and unthought-of fellowships, will be found between the most distant orders; and ravines of unexpected separation open between those otherwise closely allied. Few botanical characters are more definite than the

leaf structure illustrated in Plate XXII., which has given to one group of the Drosidæ the descriptive name of Ensatæ (see above, Chapter ix., § 11), but this conformation would not be wisely permitted to interfere in the least with the arrangement founded on the much more decisive floral aspects of the Iris and Lily. So, in the fifth volume of *Modern Painters*,[1] the sword-like, or rather rapier-like, leaves of the pine are opposed, for the sake of more vivid realization, to the shield-like leaves of the greater number of inland trees; but it would be absurd to allow this difference any share in botanical arrangement,—else we should find ourselves thrown into sudden discomfiture by the wide-waving and opening foliage of the palms and ferns.

37. But through all the defeats by which insolent endeavours to sum the orders of Creation must be reproved, and in the midst of the successes by which patient insight will be surprised, the fact of the *confirmation* of species in plants and animals must remain always a miraculous one. What outstretched sign of constant Omnipotence can be more awful, than that the susceptibility to external influences, with the reciprocal power of transformation, in the organs of the plant; and the infinite powers of moral training and mental conception over the nativity of animals, should be so restrained within impassable limits, and by inconceivable laws, that from generation to generation, under all the clouds and revolutions of heaven with its stars, and among all the calamities and convulsions of the Earth with her passions, the numbers and the names of her Kindred may still be counted for her in unfailing truth; —still the fifth sweet leaf unfold for the Rose, and the sixth spring for the Lily; and yet the wolf rave tameless round the folds of the pastoral mountains, and yet the tiger flame through the forests of the night![2]

[1] [See, in this edition, Vol. VII. p. 23.]

[2] [For other references to William Blake's song—

"Tiger, tiger, burning bright
Through the forests of the night"—

see Vol. XIX. p. 56.]

## CHAPTER XII

### CORA AND KRONOS

1. Of all the lovely wild plants—and few, mountain-bred, in Britain, are other than lovely,—that fill the clefts and crest the ridges of my Brantwood rock, the dearest to me, by far, are the clusters of whortleberry which divide possession of the lower slopes with the wood hyacinth and pervenke.[1] They are personally and specially dear to me for their association in my mind with the woods of Montanvert;[2] but the plant itself, irrespective of all accidental feeling, is indeed so beautiful in all its ways—so delicately strong in the spring of its leafage, so modestly wonderful in the formation of its fruit, and so pure in choice of its haunts, not capriciously or unfamiliarly, but growing in luxuriance through all the healthiest and sweetest seclusion of mountain territory throughout Europe,—that I think I may without any sharp remonstrance be permitted to express, for this once only, personal feeling in my nomenclature, calling it in Latin "Myrtilla Cara," and in French "Myrtille Chérie," but retaining for it in English its simply classic name, "Blue Whortle."[3]

2. It is the most common representative of the group of Myrtillæ, which on reference to our classification [p. 353] will be found central between the Ericæ and Auroræ. The

[1] [Hitherto printed "pervenche," but the true, old name of the periwinkle is "pervenke" or "pervinke": see Chaucer's *Romaunt of the Rose*, 1432:—

"Ther sprang the violete al newe,
And freshe pervinke, riche of hewe."]

[2] [Compare the Preface to the second edition of *Sesame and Lilies* (Vol. XVIII. pp. 26–27).]

[3] [In one of his note-books Ruskin refers to the mention of the flower in Keats (*Isabella*, xxxviii.):—

"Saying moreover, 'Isabel, my sweet!
Red whortle-berries droop above my head.'"

For further notes on this plant, see the Appendix, § 16, p. 545.]

UNIV. OF
CALIFORNIA

UNIV. OF CALIFORNIA

Drawn by J Ruskin

Engraved by G Allen

**MYRTILLA REGINA.**

**Sketched for her gesture only. Isella. 1877.**

distinctions between these three families may be easily remembered, and had better be learned before going farther; but first let us note their fellowship. They are all Oreiades, mountain plants; in specialty, they are all strong in stem, low in stature, and the Ericæ and Auroræ glorious in the flush of their infinitely exulting flowers ("the rapture of the heath"—above spoken of, p. 265). But all the essential loveliness of the Myrtillæ is in their leaves and fruit: the first always exquisitely finished and grouped like the most precious decorative work of sacred painting; the second, red or purple, like beads of coral or amethyst. Their minute flowers have rarely any general part or power in the colours of mountain ground; but, examined closely, they are one of the chief joys of the traveller's rest among the Alps; and full of exquisiteness unspeakable, in their several bearings and miens of blossom, so to speak. Plate XXIV. represents, however feebly, the proud bending back of her head by Myrtilla Regina:* an action as beautiful in *her* as it is terrible in the Kingly Serpent of Egypt.[1]

3. The formal differences between these three families are trenchant and easily remembered. The Ericæ are all quatrefoils, and quatrefoils of the most studied and accomplished symmetry; and they bear no berries, but only dry seeds. The Myrtillæ and Auroræ[2] are both Cinqfoil; but the Myrtillæ are symmetrical in their blossom, and the Auroræ unsymmetrical. Farther, the Myrtillæ are not absolutely determinate in the number of their foils (this being essentially a characteristic of flowers exposed to much hardship), and are thus sometimes quatrefoil, in sympathy with the Ericæ. But the Auroræ are strictly cinqfoil. These last are the only European form of a larger group, well named "Azalea" from the Greek ἄζα, dryness, and its adjective ἀζαλέα, dry or parched; and *this* name must be kept for

* "Arctostaphylos Alpina," I believe; but scarcely recognise the flower in my botanical books.

[1] [Compare *Fors Clavigera*, Letters 26 (§ 11) and 75 (§ 12).]

[2] ["Auroræ" was Ruskin's second thought; the MS. reads "Azaleæ."]

the world-wide group (including under it Rhododendron, but not Kalmia), because there is an under-meaning in the word Aza, enabling it to be applied to the substance of dry earth, and indicating one of the great functions of the Oreiades, in common with the mosses,—the collection of earth upon rocks.

4. Neither the Ericæ, as I have just said, nor Auroræ bear useful fruit; and the Ericæ are named from their consequent worthlessness in the eyes of the Greek farmer; they were the plants he "tore up" for his bed, or signal-fire,[1] his word for them including a farther sense of crushing or bruising into a heap. The Westmoreland shepherds now, alas! burn them remorselessly on the ground (and a year since had nearly set the copse of Brantwood on fire just above the house). The sense of parched and fruitless existence is given to the heaths, with beautiful application of the context, in our English translation of Jeremiah xvii. 6;[2] but I find the plant there named is, in the Septuagint, Wild Tamarisk;[3] the mountains of Palestine being, I suppose, in that latitude, too low for heath, unless in the Lebanon.

5. But I have drawn the reader's thoughts to this great race of the Oreiades at present, because they place for us in the clearest light a question which I have finally to answer before closing the first volume of *Proserpina:* namely, what is the real difference between the three ranks of Vegetative Humility, and Noblesse—the Herb, the Shrub, and the Tree?

6. Between the herb, which perishes annually, and the plants which construct year after year an increasing stem, there is, of course, no difficulty of discernment; but between the plants which, like these Oreiades, construct for themselves richest intricacy of supporting stem, yet scarcely

[1] [As in Æschylus: *Agamemnon*, 295.]

[2] ["He shall be like a heath in the desert, and shall not see when good cometh; but shall inhabit the parched places in the wilderness, in a salt land and not inhabited."]

[3] [ἀγριομυρίκη.]

rise a fathom's height above the earth they gather and adorn,—between these, and the trees that lift cathedral aisles of colossal shade on Andes and Lebanon,—where is the limit of kind to be truly set?

7. We have the three orders given, as no botanist could, in twelve lines by Milton:—

> "Then herbs of every leaf, that sudden flow'r'd,
> Op'ning their various colours, and made gay
> Her bosom, swelling sweet; and, these scarce blown,
> Forth flourish'd thick the clust'ring vine, forth crept
> The swelling gourd, up stood the corny reed
> Embattel'd in her field; and th' *humble shrub,*
> *And bush with frizzled hair implicit:* last
> Rose, as in dance, the stately trees, and spread
> Their branches hung with copious fruit, or gemm'd
> Their blossoms. With high woods the hills were crown'd;
> With tufts the valleys and each fountain side;
> With borders long the rivers."[1]

Only to learn, and be made to understand, these twelve lines thoroughly would teach a youth more of true botany than an entire Cyclopædia of modern nomenclature and description: they are, like all Milton's work, perfect in accuracy of epithet, while consummate in concentration. Exquisite in touch, as infinite in breadth, they gather into their unbroken clause of melodious compass the conception at once of the Columbian prairie, the English corn-field, the Syrian vineyard, and the Indian grove. But even Milton has left untold, and for the instant perhaps unthought of, the most solemn difference of rank between the low and lofty trees, not in magnitude only, nor in grace, but in duration.

8. Yet let us pause before passing to this greater subject, to dwell more closely on what he has told us so clearly,—the difference in Grace, namely, between the trees that rise "as in dance," and "the bush with frizzled hair." For the bush form is essentially one taken by vegetation in some kind of distress; scorched by heat, discouraged by darkness, or bitten by frost; it is the form in which isolated knots of earnest plant life stay the flux of fiery sands, bind

[1] [*Paradise Lost*, vii. 317 *seq.*]

the rents of tottering crags, purge the stagnant air of cave or chasm, and fringe with sudden hues of unhoped spring the Arctic edge of retreating desolation.

On the other hand, the trees which, as in sacred dance, make the borders of the rivers glad with their procession, and the mountain ridges statelier with their pride, are all expressions of the vegetative power in its accomplished felicities; gathering themselves into graceful companionship with the fairest arts and serenest life of man; and providing not only the sustenance and the instruments, but also the lessons and the delights, of that life, in perfectness of order, and unblighted fruition of season and time.

9. "Interitura"—yet these not to-day, nor to-morrow,[1] nor with the decline of the summer's sun. We describe a plant as small or great; and think we have given account enough of its nature and being. But the chief question for the plant, as for the human creature, is the Number of its days; for to the tree, as to its master, the words are for ever true—"As thy Day is, so shall thy Strength be."[2]

10. I am astonished hourly, more and more, at the apathy and stupidity which have prevented me hitherto from learning the most simple facts at the base of this question! Here is the myrtille bush in my hand—its cluster of some fifteen or twenty delicate green branches knitting themselves downwards into the stubborn brown of a stem on which my knife makes little impression. I have not the slightest idea how old it is, still less how old it might one day have been if I had not gathered it; and, less than the least, what hinders it from becoming as old as it likes! What doom is there over these bright green sprays, that they may never win to any height or space of verdure, nor persist beyond their narrow scope of years?

11. And the more I think the more I bewilder myself; for these bushes, which are pruned and clipped by the

[1] [Ruskin seems to be thinking of such passages as Ovid, *Metamorphoses*, ii. 306 ("omnia fato interitura gravi"), and Matthew vi. 30 ("the grass of the field, which to-day is, and to-morrow is cast into the oven").]

[2] [Deuteronomy xxxiii. 25.]

deathless Gardener into these lowly thickets of bloom, do not strew the ground with fallen branches and faded clippings in any wise,—it is the pining umbrage of the patriarchal trees that tinges the ground and betrays the foot beneath them: but, under the heather and the Alpine rose ——Well, what *is* under them, then? I never saw, nor thought of looking,—will look presently under my own bosquets and beds of lingering heather-blossom: beds indeed they were only a month since, a foot deep in flowers, and close in tufted cushions, and the mountain air that floated over them rich in honey like a draught of metheglin.

12. Not clipped, nor pruned, I think, after all,—nor dwarfed in the gardener's sense; but pausing in perpetual youth and strength, ordained out of their lips of roseate infancy. Rose-trees—the botanists have falsely called the proudest of them;—yet not trees in any wise, they, nor doomed to know the edge of axe at their roots, nor the hoary waste of time, or searing thunderstroke, on sapless branches. Continual morning for them, and *in* them; they themselves an Aurora, purple and cloudless, stayed on all the happy hills. That shall be our name for them, in the flushed Phœnician colour[1] of their height, in calm or tempest of the heavenly sea; how much holier than the depth of the Tyrian! And the queen of them on our own Alps shall be "Aurora Alpium."*

13. There is one word in the Miltonian painting of them which I must lean on specially; for the accurate English of it hides deep morality no less than botany. "With hair *implicit*." The interweaving of complex band, which knits the masses of heath or of Alpine rose into their dense tufts and spheres of flower, is to be noted both in these, and in stem structure of a higher order like that of the stone pine, for an expression of the instinct of the plant gathering itself

* "Aurora Regina," changed from Rhododendron Ferrugineum.[2]

[1] [Compare Vol. XIX. p. 380 *n*.]

[2] [Compare ii. ch. i. § 6, p. 390. For other passages in which Ruskin describes the "Alpine rose," see Vol. I. p. 157, and Vol. XVIII. p. 26.]

into protective unity, whether against cold or heat; while the forms of the trees which have no hardship to sustain are uniformly based on the effort of each spray to *separate* itself from its fellows to the utmost, and obtain around its own leaves the utmost space of air.

In vulgar modern English, the term "implicit," used of Trust or Faith, has come to signify only its serenity. But the Miltonian word gives the *reason* of serenity: the root and branch intricacy of closest knowledge and friendship.

14. I have said that Milton has told us more in these few lines than any botanist could. I will prove my saying by placing in comparison with them two passages of description by the most imaginative and generally well-trained scientific man since Linnæus—Humboldt—which, containing much that is at this moment of special use to us, are curious also in the confusion even of the two orders of annual and perennial plants, and show, therefore, the extreme need of most careful initial work in this distinction of the reign of Cora from that of Kronos.

"The disk of the setting sun appeared like a globe of fire suspended over the savannah; and its last rays, as they swept the earth, illumined the extremities of the grass, strongly agitated by the evening breeze. In the low and humid places of the equinoxial zone, even when the gramineous plants and reeds present the aspect of a meadow of turf, a rich decoration of the picture is usually wanting. I mean that variety of wild flowers which, scarcely rising above the grass, seem to lie upon a smooth bed of verdure. Between the tropics, the strength and luxury of vegetation give such a development to plants, that the smallest of the dicotyledonous family become shrubs.* It would seem as if the liliaceous plants, mingled with the gramina, assumed the place of the flowers of our meadows. Their form is indeed striking; they dazzle by the variety and splendour of their colours; but, too high above the soil, they disturb that harmonious relation which exists among the plants that compose our meadows and our turf. Nature, in her beneficence, has given the landscape under every zone its peculiar type of beauty.[1]

* I do not see what this can mean. Primroses and cowslips can't become shrubs; nor can violets, nor daisies, nor any other of our pet meadow flowers.

[1] [*Personal Narrative of Travels to the Equinoctial Regions of the New Continent during the Years 1799–1804*, by Alexander de Humboldt and Aimé Bonpland. Translated into English by Helen Maria Williams, 1818. The first passage ("The disk . . . type of beauty") is in vol. iii. pp. 368–369; the rest, in vol. iii. pp. 489–491.]

"After proceeding four hours across the savannahs, we entered into a little wood composed of shrubs and small trees, which is called El Pejual; no doubt because of the great abundance of the 'Pejoa' (Gaultheria odorata), a plant with very odoriferous leaves. The steepness of the mountain became less considerable, and we felt an indescribable pleasure in examining the plants of this region. Nowhere, perhaps, can be found collected together in so small a space of ground, productions so beautiful, and so remarkable in regard to the geography of plants. At the height of a thousand toises, the lofty savannahs of the hills terminate in a zone of shrubs, which by their appearance, their tortuous branches, their stiff leaves, and the dimensions and beauty of their purple flowers, remind us of what is called in the Cordilleras of the Andes the vegetation of the *paramos* * and the *punas*. We find there the family of the Alpine rhododendrons, the thibaudias, the andromedas, the vacciniums, and those befarias † with resinous leaves, which we have several times compared to the rhododendron of our European Alps.

"Even when nature does not produce the same species in analogous climates, either in the plains of isothermal parallels, or on table-lands the temperature of which resembles that of places nearer the poles, we still remark a striking resemblance of appearance and physiognomy in the vegetation of the most distant countries. This phenomenon is one of the most curious in the history of organic forms. I say the history; for in vain would reason forbid man to form hypotheses on the origin of things: he is not the less tormented with these insoluble problems of the distribution of beings."

15. Insoluble—yes, assuredly, poor little beaten phantasms of palpitating clay that we are—and who asked us to solve it? Even this Humboldt, quiet-hearted and modest watcher of the ways of Heaven, in the real make of him, came at last to be so far puffed up by his vain science in declining years that he must needs write a Kosmos[1] of things in the Universe, forsooth, as if he knew all about them! when he was not able meanwhile (and does not seem even to have desired the ability) to put the slightest Kosmos into his own "Personal Narrative"; but leaves one to gather what one wants out of its wild growth; or rather, to wash or

* "Deserts." Punas is not in my Spanish dictionary, and the reference to a former note is wrong in my edition of Humboldt, vol. iii., p. 490.[2]

† "The Alpine rose of equinoctial America," p. 453.

[1] [For another reference to Humboldt's *Kosmos*, see *Modern Painters*, vol. iii. (Vol. V. p. 428).]

[2] [The reference given by Humboldt is to vol. ii. p. 252, and is correct; *puna* is Peruvian for *paramo*, meaning "desert," or rather, "a mountainous place covered with stunted trees." Vols. i. and ii. are generally bound together, and this may have caused the confusion.]

winnow what may be useful out of its débris, without any vestige either of reference or index; and I must look for these fragmentary sketches of heath and grass through chapter after chapter about the races of the Indian, and religion of the Spaniard,—these also of great intrinsic value, but made useless to the general reader by interspersed experiment on the drifts of the wind and the depths of the sea.

16. But one more fragment out of a note (vol. iii., p. 494) I must give, with reference to an order of the Rhododendrons as yet wholly unknown to me:

"The name of vine tree, 'uvas camaronas' (Shrimp grapes?) is given in the Andes to plants of the genus Thibaudia on account of their *large succulent fruit.* Thus the ancient botanists give the name of Bear's vine, 'Uva Ursi,' and vine of Mount Ida, 'Vitis Idea,' to an Arbutus and Myrtillus which belong, like the Thibaudiæ, to the family of the Ericineæ."

Now, though I have one entire bookcase and half of another, and a large cabinet besides, or about fifteen feet square of books on botany beside me here, and a quantity more at Oxford, I have no means whatever, in all the heap, of finding out what a Thibaudia is like. *Loudon's Cyclopædia,*[1] the only general book I have, tells me only that it will grow well in camellia houses, that its flowers develop at Christmas, and that they are beautifully varied like a fritillary: whereupon I am very anxious to see them, and taste their fruit, and be able to tell my pupils something intelligible of them,—a new order, as it seems to me, among my Oreiades. But for the present I can make no room for them, and must be content, for England and the Alps, with my single class, Myrtilla, including all the fruit-bearing and (more or less) myrtle-leaved kinds; and Azalea for the fruitless flushing of the loftier tribes; taking the special name "Aurora" for the red and purple ones of Europe, and resigning the already accepted "Rhodora" to those of the Andes and Himalaya.

[1] [*Encyclopædia of Plants*, 1855, vol. ii. p. 1365 (No. 3019). Ruskin would have found pictures of various kinds of Thibaudia in Curtis's *Botanical Magazine*, vols. 82, 83, 86, 90, 95; Plates 4910, 5010, 5204, 5453, 5752.]

17. Of which also, with help of earnest Indian botanists, I hope nevertheless to add some little history to that of our own Oreiades;—but shall set myself on the most familiar of them first, as I partly hinted in taking for the frontispiece of this volume[1] two unchecked shoots of our commonest heath, in their state of full lustre and decline. And now I must go out and see and think—and for the first time in my life—what becomes of all these fallen blossoms, and where my own mountain Cora hides herself in winter; and where her sweet body is laid in its death.

Think of it with me, for a moment before I go. That harvest of amethyst bells, over all Scottish and Irish and Cumberland hill and moorland; what substance is there in it, yearly gathered out of the mountain winds,—stayed there, as if the morning and evening clouds had been caught out of them and woven into flowers; "Ropes of sea-sand"[2]—but that is child's magic merely, compared to the weaving of the Heath out of the cloud? And once woven, how much of it is for ever worn by the Earth? What weight of that transparent tissue, half crystal and half comb of honey, lies strewn every year dead under the snow?

I must go and look, and can write no more to-day; nor to-morrow neither. I must gather slowly what I see, and remember; and meantime leaving, to be dealt with afterwards, the difficult and quite separate question of the production of *wood*,[3] I will close this first volume of *Proserpina* with some necessary statements respecting the operations, serviceable to other creatures than themselves, in which the lives of the noblest plants are ended: honourable in this service equally, though evanescent,—some,—in the passing of a breeze—or the dying of a day;—and patient some, of storm and time, serene in fruitful sanctity, through all the uncounted ages which Man has polluted with his tears.

[1] [See Plate IX.; p. 189.]
[2] [See above, p. 221.]
[3] [This question is discussed in vol. ii. ch. viii. (below, pp. 498 *seq.*). See also, above, p. 338 *n.*]

## CHAPTER XIII

### THE SEED AND HUSK

1. Not the least sorrowful, nor least absurd of the confusions brought on us by unscholarly botanists, blundering into foreign languages, when they do not know how to use their own, is that which has followed on their practice of calling the seed-vessels of flowers "egg-vessels,"* in Latin; thus involving total loss of the power of the good old English word "husk," and the good old French one, "cosse." For all the treasuries of plants (see Chapter iv., § 17) may be best conceived, and described, generally, as consisting of "seed" and "husk,"—for the most part two or more seeds, in a husk composed of two or more parts, as pease in their shell, pips in an orange, or kernels in a walnut; but whatever their number, or the method of their enclosure, let the student keep clear in his mind, for the base of all study of fructification, the broad distinction between the seed, as one thing, and the husk as another: the seed, essential to the continuance of the plant's race; and the husk, adapted, primarily, to its guard and dissemination; but secondarily, to quite other and far more important functions.

2. For on this distinction follows another practical one of great importance. A seed may serve, and many do mightily serve, for the food of man, when boiled, crushed, or otherwise industriously prepared by man himself, for his mere *sustenance*. But the *husk* of the seed is prepared in many cases for the delight of his eyes, and the pleasure

* More literally, "persons to whom the care of eggs is entrusted."[1]

[1] [Ovaries (see above, p. 259); *ovarius* occurs in a Latin inscription in the sense of a person who took charge of the new-laid eggs.]

of his palate, by Nature herself, and is then called a "fruit."

3. The varieties of structure both in seed and husk, and yet more, the manner in which the one is contained, and distributed by, the other, are infinite; and in some cases the husk is apparently wanting, or takes some unrecognizable form. But in far the plurality of instances the two parts of the plant's treasury are easily distinguishable, and must be separately studied, whatever their apparent closeness of relation, or (as in all natural things) the equivocation sometimes taking place between the one and the other. To me, the especially curious point in this matter is that, while I find the most elaborate accounts given by botanists of the stages of growth in each of these parts of the treasury, they never say of what use the guardian is to the guarded part, irrespective of its service to man. The mechanical action of the husk in containing and scattering the seeds, they indeed often notice and insist on; but they do not tell us of what, if any, nutritious or fostering use the rind is to a chestnut, or an orange's pulp to its pips, or a peach's juice to its stone.

4. Putting aside this deeper question for the moment, let us make sure we understand well, and define safely, the separate parts themselves. A seed consists essentially of a store, or sack, containing substance to nourish a germ of life, which is surrounded by such substance, and in the process of growth is first fed by it. The germ of life itself rises into two portions, and not more than two, in the seeds of two-leaved plants; but this symmetrical dualism must not be allowed to confuse the student's conception, of the *three* organically separate parts,—the tough skin of a bean, for instance; the softer contents of it which we boil to eat; and the small germ from which the root springs when it is sown. A bean is the best type of the whole structure. An almond out of its shell, a peach-kernel, and an apple-pip are also clear and perfect, though varied types.

5. The husk, or seed-vessel, is seen in perfect simplicity of type in the pod of a bean, or the globe of a poppy. There are, I believe, flowers in which it is absent or imperfect; and when it contains only one seed, it may be so small and closely united with the seed it contains, that both will be naturally thought of as one thing only. Thus, in a dandelion, the little brown grains, which may be blown away, each with its silken parachute, are every one of them a complete husk and seed together. But the majority of instances (and those of plants the most serviceable to man) in which the seed-vessel has entirely a separate structure and mechanical power, justify us in giving it the normal term "husk," as the most widely applicable and intelligible.

6. The change of green, hard, and tasteless vegetable substance into beautifully coloured, soft, and delicious substance, which produces what we call a fruit, is, in most cases, of the husk only; in others, of the part of the stalk which immediately sustains the seed; and in a very few instances, not properly a change, but a distinct formation, of fruity substance between the husk and seed. Normally, however, the husk, like the seed, consists always of three parts; it has an outer skin, a central substance of peculiar nature, and an inner skin, which holds the seed. The main difficulty, in describing or thinking of the completely ripened product of any plant, is to discern clearly which is the inner skin of the husk, and which the outer skin of the seed. The peach is in this respect the best general type,—the woolly skin being the outer one of the husk; the part we eat, the central substance of the husk; and the hard shell of the stone, the inner skin of the husk. The bitter kernel within is the seed.

7. In this case, and in the plum and cherry, the two parts under present examination—husk and seed—separate naturally; the fruity part, which is the body of the husk, adhering firmly to the shell, which is its inner coat. But in the walnut and almond, the two outer parts of the husk

separate from the interior one, which becomes an apparently independent "shell." So that when first I approached this subject I divided the general structure of a treasury into *three* parts—husk, shell, and kernel; and this division, when we once have mastered the main one, will be often useful. But at first let the student keep steadily to his conception of the two constant parts, husk and seed, reserving the idea of shells and kernels for one group of plants only.

8. It will not be always without difficulty that he maintains the distinction, when the tree pretends to have changed it. Thus, in the chestnut, the inner coat of the husk becomes brown, adheres to the seed, and seems part of it; and we naturally call only the thick, green, prickly coat, the husk. But this is only one of the deceiving tricks of Nature, to compel our attention more closely. The real place of separation, to *her* mind, is between the mahogany coloured shell and the nut itself, and that more or less silky and flossy coating within the brown shell is the true lining of the entire "husk." The paler brown skin, following the rugosities of the nut, is the true sack or skin of the seed. Similarly in the walnut and almond.

9. But, in the apple, two new tricks are played us. First, in the brown skin of the ripe pip, we might imagine we saw the part correspondent to the mahogany skin of the chestnut, and therefore the inner coat of the husk. But it is not so. The brown skin of the pips belongs to them properly, and is all their own. It is the true skin or sack of the seed. The inner coat of the husk is the smooth, white, scaly part of the core that holds them.

Then,—for trick number two. We should as naturally imagine the skin of the apple, which we peel off, to be correspondent to the skin of the peach; and therefore, to be the outer part of the husk. But not at all. The outer part of the husk in the apple is melted away into the fruity mass of it, and the red skin outside is the skin of its *stalk*, not of its seed-vessel at all!

10. I say "of its stalk,"—that is to say, of the part of

the stalk immediately sustaining the seed, commonly called the torus, and expanding into the calyx. In the apple, this torus incorporates itself with the husk completely; then refines its own external skin, and colours *that* variously and beautifully, like the true skin of the husk in the peach, while the withered leaves of the calyx remain in the "eye" of the apple.

But in the "hip" of the rose, the incorporation with the husk of the seed does not take place. The torus, or, —as in this flower from its peculiar form it is called,— the tube of the calyx, alone forms the frutescent part of the hip; and the complete seeds, husk and all (the firm triangular husk enclosing an almond-shaped kernel), are grouped closely in its interior cavity, while the calyx remains on the top in a large and scarcely withering star. In the nut, the calyx remains green and beautiful, forming what we call the husk of a filbert; and again we find Nature amusing herself by trying to make us think that this strict envelope, almost closing over the single seed, is the same thing to the nut that its green shell is to a walnut!

11. With still more capricious masquing, she varies and hides the structure of her "berries."

The strawberry is a hip turned inside-out, the frutescent receptacle changed into a scarlet ball, or cone, of crystalline and delicious coral, in the outside of which the separate seeds, husk and all, are imbedded. In the raspberry and blackberry, the interior mound remains sapless; and the rubied translucency of dulcet substance is formed round each separate seed, *upon* its husk; not a part of the husk, but now an entirely independent and added portion of the plant's bodily form.

12. What is thus done for each seed, on the *out*side of the receptacle, in the raspberry, is done for each seed, *in*side the calyx, in a pomegranate; which is a hip in which the seeds have become surrounded with a radiant juice, richer than claret wine; while the seed itself, within

the generous jewel, is succulent also, and spoken of by Tournefort as a "baie succulente."[1] The tube of the calyx, brown-russet like a large hip, externally, is yet otherwise divided, and separated wholly from the cinque-foiled, and cinque-celled rose, both in number of petal and division of treasuries; the calyx has eight points, and nine cells.

18. Lastly, in the orange, the fount of fragrant juice is interposed between the seed and the husk. It is wholly independent of both; the Aurantine rind, with its white lining and divided compartments, is the true husk: the orange pips are the true seeds; and the eatable part of the fruit is formed between them, in clusters of delicate little flasks, as if a fairy's store of scented wine had been laid up by her in the hollow of a chestnut shell, between the nut and rind; and then the green changed to gold.

14. I have said "*lastly*"—of the orange, for fear of the reader's weariness only; not as having yet represented, far less exhausted, the variety of frutescent form. But these are the most important types of it; and before I can explain the relation between these, and another, too often confounded with them—the *granular* form of the seed of grasses,—I must give some account of what, to man, is far more important than the form—the gift to him in fruit-food; and trial, in fruit-temptation.

[1] ["Fructum succi plenum": see vol. i. p. 653, of the Latin edition of 1719 (Josephi Pitton Tournefort, *Institutiones Rei Herbariæ*). The pine-apple is described in an appendix, which, however, does not appear in the French edition of 1694.]

primarily separate our notion of their gifts to men into the three elements, flour, oil, and wine; and have instantly and always intelligible names for them in Latin, French, and English.

And I think it best not to confuse our ideas of pure vegetable substance with the possible process of fermentation:—so that rather than "wine," for a constant specific term, I will take "Nectar,"—this term more rightly including the juices of the peach, nectarine, and plum, as well as those of the grape, currant, and apple.

Our three separate substances will then be easily named in all three languages:—

| | | |
|---|---|---|
| Farina. | Oleum. | Nectar. |
| Farine. | Huile. | Nectare. |
| Flour. | Oil. | Nectar. |

There is this farther advantage in keeping the third common term, that it leaves us the words Succus, Jus, Juice, for other liquid products of plants, watery, milky, sugary, or resinous,—often indeed important to man, but often also without either agreeable flavour or nutritious power; and it is therefore to be observed with care that we may use the word "juice," of a liquid produced by any part of a plant, but "nectar," only of the juices produced in its fruit.

6. But the good and pleasure of fruit is not in the juice only;—in some kinds, and those not the least valuable (as the date), it is not in the juice at all. We still stand absolutely in want of a word to express the more or less firm *substance* of fruit, as distinguished from all other products of a plant. And with the usual ill-luck—(I advisedly think of it as demoniacal misfortune)—of botanical science, no other name has been yet used for such substance than the entirely false and ugly one of "Flesh," Fr., "Chair," with its still more painful derivation "Charnu," and in England the monstrous scientific term, "Sarco-carp."

But, under the housewifery of Proserpina, since we are

to call the juice of fruit, Nectar, its substance will be as naturally and easily called Ambrosia; and I have no doubt that this, with the other names defined in this chapter, will not only be found practically more convenient than the phrases in common use, but will more securely fix in the student's mind a true conception of the essential differences in substance, which, ultimately, depend wholly on their pleasantness to human perception, and offices for human good; and not at all on any otherwise explicable structure or faculty. It is of no use to determine, by microscope or retort, that cinnamon is made of cells with so many walls, or grape-juice of molecules with so many sides;—we are just as far as ever from understanding why these particular interstices should be aromatic, and these special parallelopipeds exhilarating, as we were in the savagely unscientific days when we could only see with our eyes, and smell with our noses. But to call each of these separate substances by a name rightly belonging to it through all the past variations of the language of educated man, will probably enable us often to discern powers in the thing itself, of affecting the human body and mind, which are indeed qualities infinitely more its *own*, than any which can possibly be extracted by the point of a knife, or brayed out with a mortar and pestle.

7. Thus, to take merely instance in the three main elements of which we have just determined the names,—flour, oil, and ambrosia;—the differences in the kinds of pleasure which the tongue received from the powderiness of oat-cake, or a well-boiled potato—(in the days when oat-cake and potatoes were!)—from the glossily-softened crispness of a well-made salad, and from the cool and fragrant amber of an apricot, are indeed distinctions between the essential virtues of things which were made to be *tasted*, much more than to be eaten; and in their various methods of ministry to, and temptation of, human appetites, have their part in the history, not of elements merely, but of souls; and of the soul-virtues, which from the beginning of the

world have bade the barrel of meal not waste, nor the cruse of oil fail; and have planted, by waters of comfort, the fruits which are for the healing of nations.[1]

8. And, again, therefore, I must repeat, with insistence, the claim I have made for the limitation of language to the use made of it by educated men. The word "carp" could never have multiplied itself into the absurdities of endo-carps and epi-carps, but in the mouths of men who scarcely ever read it in its original letters, and therefore never recognized it as meaning precisely the same thing as "fructus," which word, being a little more familiar with, they would have scarcely abused to the same extent; they would not have called a walnut shell an intra-fruct— or a grape skin an extra-fruct; but again, because, though they are accustomed to the English "fructify," "frugivorous,"—and "usufruct," they are unaccustomed to the Latin "fruor," and unconscious therefore that the derivative "fructus," must always, in right use, mean an *enjoyed* thing, they generalize every mature vegetable product under the term; and we find Dr. Gray coolly telling us that there is no fruit so "likely to be mistaken for a seed,"[2] as a grain of corn! a grain, whether of corn, or any other grass, being precisely the vegetable structure to which frutescent change is for ever forbidden! and to which the word *seed* is primarily and perfectly applicable!—the thing to be *sown*, not grafted.

9. But to mark this total incapability of frutescent change, and connect the form of the seed more definitely with its dusty treasure, it is better to reserve, when we are speaking with precision, the term "grain" for the seeds of the grasses: the difficulty is greater in French, than in English: because they have no monosyllabic word for the constantly granular "seed"; but for us the terms are all simple, and already in right use, only not quite clearly enough understood; and there remains only one real

[1] [1 Kings xvii. 14; Psalms xxiii. 2 (Prayer-book version); Revelation xxii. 2.]
[2] [*Introduction to Structural and Systematic Botany*, 1858, p. 314 (§ 604).]

difficulty now in our system of nomenclature, that having taken the word "husk" for the seed-vessel, we are left without a general word for the true fringe of a filbert, or the chaff of a grass. I don't know whether the French "frange" could be used by them in this sense, if we took it in English botany. But for the present, we can manage well enough without it, one general term, "chaff," serving for all the grasses, "cup" for acorns, and "fringe" for nuts.

10. But I call this a *real* difficulty, because I suppose, among the myriads of plants of which I know nothing, there may be forms of the envelope of fruits or seeds which may, for comfort of speech, require some common generic name. One *un*real difficulty, or shadow of difficulty, remains in our having no entirely comprehensive name for seed and seed-vessel together than that the botanists now use, "fruit." But practically, even now, people feel that they can't gather figs of thistles,[1] and never speak of the fructification of a thistle, or of the fruit of a dandelion. And, re-assembling now, in one view, the words we have determined on, they will be found enough for all practical service, and in such service always accurate, and, usually, suggestive. I repeat them in brief order, with such farther explanation as they need.

11. All ripe products of the life of flowers consist essentially of the Seed and Husk,—these being, in certain cases, sustained, surrounded, or provided with means of motion, by other parts of the plant; or by developments of their own form which require in each case distinct names. Thus the white cushion of the dandelion to which its brown seeds are attached, and the personal parachutes which belong to each, must be separately described for that species of plants; it is the little brown thing they sustain and carry away on the wind, which must be examined as the essential product of the floret;—the "seed and husk."

[1] [Matthew vii. 16.]

12. Every seed has a husk, holding either that seed alone, or other seeds with it.

Every perfect seed consists of an embryo, and the substance which first nourishes that embryo; the whole enclosed in a sack or other sufficient envelope. Three essential parts altogether.

Every perfect husk, vulgarly pericarp, or "round-fruit," —(as periwig, "round-wig"),—consists of a shell (vulgarly endocarp), rind (vulgarly mesocarp), and skin (vulgarly epicarp); three essential parts altogether. But one or more of these parts may be effaced, or confused with another; and in the seeds of grasses they all concentrate themselves into bran.

13. When a husk consists of two or more parts, each of which has a separate shaft and volute, uniting in the pillar and volute of the flower, each separate piece of the husk is called a "carpel." The name was first given by De Candolle,[1] and must be retained. But it continually happens that a simple husk divides into two parts corresponding to the two leaves of the embryo, as in the peach, or symmetrically holding alternate seeds, as in the pea. The beautiful drawing of the pea-shell with its seeds, in Rousseau's botany,[2] is the only one I have seen which rightly shows and expresses this arrangement.

14. A Fruit, is either the husk, receptacle, petal, or other part of a flower *external to the seed*, in which chemical changes have taken place, fitting it for the most part to become pleasant and healthful food for man, or other living animals; but in some cases making it bitter or poisonous to them, and the enjoyment of it depraved or deadly. But, as far as we know, it is without any definite

[1] [Really by Dunal: *Monographie des Anonacées*, 1817, p. 13 ("il serait utile et commode d'avoir un mot particulier pour exprimer, dans un fruit multiple, le fruit partiel résultant de chaque ovaire féconde et développé: je propose ici celui de *carpelle, carpellum*").]

[2] [*La Botanique de J. J. Rousseau; Lettres Élémentaires sur la Botanique*, Paris, 1805, Plate 15 (the plates are "d'après les peintures de P. J. Redouté"); referred to again in ii. ch. vi. § 6 (p. 475). Ruskin greatly admired the book: see the Introduction, above, p. xl.]

office to the seed it contains; and the change takes place entirely to fit the plant to the service of animals.* In its perfection, the Fruit Gift is limited to a temperate zone, of which the polar limit is marked by the strawberry, and the equatorial by the orange. The more arctic regions produce even the smallest kinds of fruit with difficulty; and the more equatorial, in coarse, oleaginous, or over-luscious masses.

15. All the most perfect fruits are developed *from exquisite forms either of foliage or flower.* The vine leaf, in its generally decorative power, is the most important, both in life and in art, of all that shade the habitations of men. The olive leaf is, without any rival, the most beautiful of the leaves of timber trees; and its blossom, though minute, of extreme beauty. The apple is essentially the fruit of the rose, and the peach of her only rival in her own colour. The cherry and orange blossom are the two types of floral snow.

16. And, lastly, let my readers be assured, the economy of blossom and fruit, with the distribution of water, will be found hereafter the most accurate test of wise national government.

For example of the action of a national government, rightly so called, in these matters, I refer the student to the Mariegolas of Venice, translated in *Fors Clavigera;*[1] and I close this chapter, and this first volume of *Proserpina*, not without pride, in the words I wrote on this same matter eighteen years ago. "So far as the labourer's immediate

* A most singular sign of this function is given in the chemistry of the changes, according to a French botanist, to whose carefully and richly illustrated volume I shall in future often refer my readers, "Vers l'époque de la maturité, les fruits *exhalent de l'acide carbonique.* Ils ne présentent plus dès lors aucun dégagement d'oxygène pendant le jour, et *respirent, pour ainsi dire, à la façon des animaux.*"—(Figuier, *Histoire des Plantes*, p. 182. 8vo. Paris. Hachette, 1874.[2])

[1] [For the laws of Venice with regard to the sale of fruit, see Letter 74, §§ 10–12; for the term "Mariegola," *ibid.*, § 12 *n.*]

[2] [Compare below, p. 508 *n.*]

profit is concerned, it matters not an iron filing whether I employ him in growing a peach, or in forging a bomb-shell. But the difference to him is final, whether, when his child is ill, I walk into his cottage, and give it the peach,—or drop the shell down his chimney, and blow his roof off."[1]

[1] [*Unto this Last*, § 76 (Vol. XVII. p. 103).]

UNIV. OF
CALIFORNIA

UNIV. OF CALIFORNIA

VIOLA CANINA

**Fast Sketch. to show grouping of leaves.**

# PROSERPINA

## VOLUME II[1]

## CHAPTER I

### VIOLA

1. ALTHOUGH I have not been able in the preceding volume to complete, in any wise as I desired, the account of the several parts and actions of plants in general, I will not delay any longer our entrance on the examination of particular kinds, though here and there I must interrupt such special study by recurring to general principles, or points of wider interest. But the scope of such larger inquiry will be best seen, and the use of it best felt, by entering now on specific study.

I begin with the Violet, because the arrangement of the group to which it belongs—Cytherides[2]—is more arbitrary than that of the rest, and calls for some immediate explanation.

2. I fear that my readers may expect me to write something very pretty for them about violets: but my time for writing prettily is long past; and it requires some watching over myself, I find, to keep me even from writing querulously. For while, the older I grow, very thankfully I recognize more and more the number of pleasures granted

[1] [This volume was never completed, and no title-page to it was issued.]

[2] [Including Viola, Veronica, and Giulietta (=Polygala, or milkwort): see i. ch. xi. § 27, p. 356. The naming of the group is explained below, § 44, p. 414.]

to human eyes in this fair world, I recognize also an increasing sensitiveness in my temper to anything that interferes with them; and a grievous readiness to find fault—always of course submissively, but very articulately—with whatever Nature seems to me not to have managed to the best of her power;—as, for extreme instance, her late arrangements of frost this spring, destroying all the beauty of the wood sorrels; nor am I less inclined, looking to her as the greatest of sculptors and painters, to ask, every time I see a narcissus, why it should be wrapped up in brown paper; and every time I see a violet, what it wants with a spur?

3. What *any* flower wants with a spur, is indeed the simplest and hitherto to me unanswerablest form of the question; nevertheless, when blossoms grow in spires, and are crowded together, and have to grow partly downwards, in order to win their share of light and breeze, one can see some reason for the effort of the petals to expand upwards and backwards also. But that a violet, who has her little stalk to herself, and might grow straight up, if she pleased, should be pleased to do nothing of the sort, but quite gratuitously bend her stalk down at the top, and fasten herself to it by her waist, as it were,—this is so much more like a girl of the period's fancy than a violet's, that I never gather one separately but with renewed astonishment at it.

4. One reason indeed there is, which I never thought of until this moment! a piece of stupidity which I can only pardon myself in, because, as it has chanced, I have studied violets most in gardens, not in their wild haunts, —partly thinking their Athenian honour was as a garden flower; and partly being always led away from them, among the hills, by flowers which I could see nowhere else. With all excuse I can furbish up, however, it is shameful that the truth of the matter never struck me before, or at least this bit of the truth—as follows.

5. The Greeks, and Milton, alike speak of violets as

growing in meadows (or dales). But the Greeks did so because they could not fancy any delight except in meadows;[1] and Milton, because he wanted a rhyme to nightingale[2]—and, after all, was London bred. But Viola's beloved knew where violets grew in Illyria,[3]—and grow everywhere else also, when they can,—on a *bank*, facing the south.

Just as distinctly as the daisy and buttercup are *meadow* flowers, the violet is a *bank* flower, and would fain grow always on a steep slope, towards the sun. And it is so poised on its stem that it shows, when growing on a slope, the full space and opening of its flower,—not at all, in any strain of modesty, hiding *itself*, though it may easily be, by grass or mossy stone, "half hidden,"[4]—but, to the full, showing itself, and intending to be lovely and luminous, as fragrant, to the uttermost of its soft power.

Nor merely in its oblique setting on the stalk, but in the reversion of its two upper petals, the flower shows this purpose of being fully seen. (For a flower that *does* hide itself, take a lily of the valley, or the bell of a grape hyacinth, or a cyclamen.) But respecting this matter of petal-reversion, we must now farther state two or three general principles.

6. A perfect or pure flower, as a rose, oxalis, or campanula, is always composed of an unbroken whorl, or corolla, in the form of a disk, cup, bell, or, if it draw together again at the lips, a narrow-necked vase. This cup, bell, or vase, is divided into similar petals (or segments, which are petals carefully joined), varying in number from three

[1] [Compare *Modern Painters*, vol. iii. (Vol. V. pp. 234 *seq.*).]

[2] [*Comus*, 233, 234:—

"And in the violet-embroidered vale,
Where the love-lorn nightingale . . ."]

[3] [*Twelfth Night*, i. 1, 6:—

"If music be the food of love, play on; . . .
O! it came o'er my ear like the sweet sound
That breathes upon a bank of violets."]

[4] [See Wordsworth's piece beginning "She dwelt among the untrodden ways":—

"A violet by a mossy stone
Half hidden from the eye!"]

to eight, and enclosed by a calyx whose sepals are symmetrical also.

An imperfect, or, as I am inclined rather to call it, an "injured" flower, is one in which some of the petals have inferior office and position, and are either degraded, for the benefit of others, or expanded and honoured at the cost of others.[1]

Of this process, the first and simplest condition is the reversal of the upper petals and elongation of the lower ones, in blossoms set on the side of a clustered stalk. When the change is simply and directly dependent on their position in the cluster, as in Aurora Regina,* modifying every bell just in proportion as it declines from the perfected central one, some of the loveliest groups of form are produced which can be seen in any inferior organism: but when the irregularity becomes fixed, and the flower is always to the same extent distorted, whatever its position in the cluster, the plant is to be rightly thought of as reduced to a lower rank in creation.

7. It is to be observed, also, that these inferior forms of flower have always the appearance of being produced by some kind of mischief—blight, bite, or ill-breeding; they never suggest the idea of improving themselves, now, into anything better; one is only afraid of their tearing or puffing themselves into something worse. Nay, even the quite natural and simple conditions of inferior vegetable do not in the least suggest, to the unbitten or unblighted human intellect, the notion of development into anything other than their like: one does not expect a mushroom to translate itself into a pineapple, nor a betony to moralize itself into a lily, nor a snapdragon to soften himself into a lilac.

8. It is very possible, indeed, that the recent phrenzy for the investigation of digestive and reproductive operations

* Above, p. 367 *n.*

[1] [See further, below, ch. v. § 1, p. 466.]

in plants may by this time have furnished the microscopic malice of botanists with providentially disgusting reasons, or demoniacally nasty necessities,[1] for every possible spur, spike, jag, sting, rent, blotch, flaw, freckle, filth, or venom, which can be detected in the construction, or distilled from the dissolution, of vegetable organism. But with these obscene processes and prurient apparitions the gentle and happy scholar of flowers has nothing whatever to do. I am amazed and saddened, more than I care to say, by finding how much that is abominable may be discovered by an ill-taught curiosity, in the purest things that earth is allowed to produce for us;—perhaps if we were less reprobate in our own ways, the grass which is our type might conduct itself better, even though *it* has no hope but of being cast into the oven;[2] in the meantime, healthy human eyes and thoughts are to be set on the lovely laws of its growth and habitation, and not on the mean mysteries of its birth.

9. I relieve, therefore, our presently inquiring souls from any farther care as to the reason for a violet's spur,—or for the extremely ugly arrangements of its stamens and style, invisible unless by vexatious and vicious peeping. You are to think of a violet only in its green leaves, and purple or golden petals;—you are to know the varieties of form in both, proper to common species; and in what kind of places they all most fondly live, and most deeply glow.

"And the recreation of the minde which is taken heereby cannot be but verie good and honest, for they admonish and stir up a man to that which is comely and honest. For flowers, through their beautie, varietie of colour, and exquisite forme, do bring to a liberall and gentle manly minde the remembrance of honestie, comeliness, and all kinds of vertues. For it would be an unseemely and filthie thing, as a certain wise man saith, for him that doth looke upon and handle faire and beautiful things, and who frequenteth and is conversant in faire and beautiful places, to have his mind not faire, but filthie and deformed."[3]

[1] [Compare vol. i. ch. ii. § 2 *n.* (above, p. 219); and below, p. 414.]
[2] [Isaiah xl. 6 ("all flesh is grass"); Matthew vi. 30.]
[3] [*The Herball*, 1597, vol. i. pp. 698–699.]

10. Thus Gerarde, in the close of his introductory notice of the violet,—speaking of things (honesty, comeliness, and the like) scarcely now recognized as desirable in the realm of England; but having previously observed that violets are useful for the making of garlands for the head, and posies to smell to;—in which last function I observe they are still pleasing to the British public: and I found the children here,[1] only the other day, munching a confection of candied violet leaves. What pleasure the flower can still give us, uncandied, and unbound, but in its own place and life, I will try to trace through some of its constant laws.

11. And first, let us be clear that the native colour of the violet *is* violet; and that the white and yellow kinds, though pretty in their place and way, are not to be thought of in generally meditating the flower's quality or power. A white violet is to black ones what a black man is to white ones; and the yellow varieties are, I believe, properly pansies, and belong also to wild districts for the most part; but the true violet, which I have just now called "black," with Gerarde, "the blacke or purple violet, hath a great prerogative above others,"[2] and all the nobler species of the pansy itself are of full purple, inclining, however, in the ordinary wild violet to blue. In the *Laws of Fésole*, chap. vii., §§ 20, 21,[3] I have made this dark pansy the representative of purple pure; the viola odorata, of the link between that full purple and blue; and the heath-blossom, of the link between that full purple and red. The reader will do well, as much as may be possible to him, to associate his study of botany, as indeed all other studies of visible things, with that of painting: but he must remember that he cannot know what violet colour really is, unless he watch the flower in its *early* growth. It becomes dim in age, and dark when it is gathered—at least, when it is tied in bunches;—but I am under the impression that the colour actually deadens also,—at all events, no other

[1] [At Brantwood, the children of Mr. and Mrs. Arthur Severn.]
[2] [*The Herball*, 1597, vol. i. p. 698.]
[3] [Vol. XV. p. 426.]

single flower of the same quiet colour lights up the ground near it as a violet will. The bright hound's-tongue looks merely like a spot of bright paint; but a young violet glows like painted glass.[1]

12. Which, when you have once well noticed, the two lines of Milton and Shakespeare which seem opposed, will both become clear to you. The said lines are dragged from hand to hand along their pages of pilfered quotations by the hack botanists,—who probably never saw *them*, nor anything else, *in* Shakespeare or Milton in their lives,—till even in reading them where they rightly come, you can scarcely recover their fresh meaning: but none of the botanists ever think of asking why Perdita calls the violet "dim,"[2] and Milton "glowing."

Perdita, indeed, calls it dim, at that moment, in thinking of her own love, and the hidden passion of it, unspeakable; nor is Milton without some purpose of using it as an emblem of love, mourning,—but, in both cases, the subdued and quiet hue of the flower as an actual tint of colour, and the strange force and life of it as a part of light, are felt to their uttermost.

And observe, also, that both of the poets contrast the violet, in its softness, with the intense marking of the pansy. Milton makes the opposition directly—

> "the pansy, freaked with jet,
> The glowing violet."[3]

Shakespeare shows yet stronger sense of the difference, in the "purple with Love's wound"[4] of the pansy, while the violet is sweet with Love's hidden life, and sweeter than the lids of Juno's eyes.

[1] [So, of the poppy: vol. i. ch. v. § 2 (above, p. 267).]

[2] [*The Winter's Tale*, Act iv. sc. 4, 120:—

> "violets dim,
> But sweeter than the lids of Juno's eyes
> Or Cytherea's breath."]

[3] [*Lycidas*, 145.]

[4] [*A Midsummer Night's Dream*, Act ii. sc. 1, 167. Compare Vol. XV. p. 498, where the lines will be found. See also below, p. 409.]

Whereupon, we may perhaps consider with ourselves a little, what the difference *is* between a violet and a pansy?

13. Is, I say, and was, and is to come,[1]—in spite of florists, who try to make pansies round, instead of pentagonal; and of the wise classifying people, who say that violets and pansies are the same thing—and that neither of them are of much interest! As, for instance, Dr. Lindley in his *Ladies' Botany*:[2]—

"Violets—sweet Violets, and Pansies, or Heart's-ease, represent a small family, with the structure of which you should be familiar; more, however, for the sake of its singularity than for its extent or importance, for the family is a very small one, and there are but few species belonging to it in which much interest is taken. As the parts of the Heart's-ease are larger than those of the Violet, let us select the former in preference for the subject of our study."

Whereupon we plunge instantly into the usual account of things with horns and tails. "The stamens are five in number—two of them, which are in front of the others, are hidden within the horn of the front petal," etc., etc., etc. (Note in passing, by the "*horn of the front*" petal he means the "*spur of the bottom*" one, which indeed does stand in front of the rest,—but if therefore *it* is to be called the *front* petal—which is the back one?) You may find in the next paragraph description of a "singular conformation," and the interesting conclusion that "no one has yet discovered for what purpose this singular conformation was provided." But you will not, in the entire article, find the least attempt to tell you the difference between a violet and a pansy!—except in one statement—and *that* false! "The sweet violet will have no rival among flowers, if we merely seek for delicate fragrance; but her sister, the heart's-ease, who is destitute of all sweetness, far surpasses her in rich dresses and *gaudy*!!! colours." The

[1] [Revelation iv. 8.]
[2] [See the reference to this book, above, p. 272. Ruskin here quotes from vol. i. pp. 64, 66, 67.]

heart's-ease is not without sweetness. There are sweet pansies scented, and dog pansies unscented—as there are sweet violets scented, and dog violets unscented. What is the real difference?

14. I turn to another scientific gentleman—*more* scientific in form indeed, Mr. Grindon,[1]—and find, for another interesting phenomenon in the violet, that it sometimes produces flowers without any petals! and in the pansy, that "the flowers turn towards the sun, and when many are open at once, present a droll appearance, looking like a number of faces all on the 'qui vive.'" But nothing of the difference between them, except something about "stipules," of which "it is important to observe that the leaves should be taken from the middle of the stem—those above and below being variable."

I observe, however, that Mr. Grindon *has* arranged his violets under the letter A, and his pansies under the letter B, and that something may be really made out of him, with an hour or two's work. I am content, however, at present, with his simplifying assurance that of violet and pansy together, "six species grow wild in Britain—or, as some believe, only four—while the analysts run the number up to fifteen."

15. Next I try *Loudon's Cyclopædia*, which, through all its 700 pages, is equally silent on the business; and next, Mr. Baxter's *British Flowering Plants*,[2] in the index of which I find neither Pansy nor Heart's-ease, and only the "Calathian" Violet (where on earth is Calathia?[3]), which proves, on turning it up, to be a Gentian.

[1] [*British and Garden Botany*, by Leo H. Grindon, Lecturer on Botany at the Royal School of Medicine, Manchester, 1864, pp. 155–157.]

[2] [*British Phænogamous Botany; or, Figures and Descriptions of the Genera of British Flowering Plants*, by William Baxter (Curator of the Oxford Botanic Gardens), Oxford, 1834–1843; referred to also in Vol. XV. p. 31.]

[3] [Here Ruskin's recollection of Pliny fails him, Calathian not being a place-name. See *Nat. Hist.*, xxi. 15 ("in totum vero sine odore minutoque folio Calathiana, munus autumni"), "Calathiana" meaning "like a basket" (*calathus*). Other MSS. of Pliny read, however, *Calatiana*, which an old commentator explains as "a Calatia, oppido Italiæ." Pliny's name "Calathian Violet" is adopted by Gerard and the other old botanists for Gentiana Pneumonanthe.]

16. At last, I take my Figuier[1] (but what should I do if I only knew English?), and find this much of clue to the matter:—

"Qu'est—ce que la Pensée? Cette jolie plante appartient aussi au genre Viola, mais à un section de ce genre. En effet, dans les Pensées, les pétales supérieurs et lateraux sont dirigés en haut, l'inférieur seul est dirigé en bas: et de plus, le stigmate est urcéolé, globuleux."

And farther, this general description of the whole violet tribe, which I translate, that we may have its full value:—

"The violet is a plant without a stem (tige),—(see vol. i., p. 154),—whose height does not surpass one or two decimetres. Its leaves, radical, or carried on stolons (vol. i., p. 158), are sharp, or oval, crenulate, or heart-shape. Its stipules are oval-acuminate, or lanceolate. Its flowers, of sweet scent, of a dark violet or a reddish blue, are carried each on a slender peduncle, which bends down at the summit. Such is, for the botanist, the Violet, of which the poets would give assuredly another description."

17. Perhaps; or even the painters! or even an ordinary unbotanical human creature! I must set about my business, at any rate, in my own way, now, as I best can, looking first at things themselves, and then putting this and that together, out of these botanical persons, which they can't put together out of themselves. And first, I go down into my kitchen garden, where the path to the lake has a border of pansies on both sides all the way down, with clusters of narcissus behind them. And pulling up a handful of pansies by the roots, I find them "without stems," indeed, if a stem means a wooden thing; but I should say, for a low-growing flower, quite lankily and disagreeably stalky! And, thinking over what I remember about wild pansies, I find an impression on my mind of their being rather more stalky, always, than is quite graceful; and, for all their fine flowers, having rather a weedy and littery look, and getting into places where they have no business. See, again, vol. i., chap. vi., § 5 [p. 284].

18. And now, going up into my flower and fruit garden, I find (June 2nd, 1881, half-past six, morning), among the

[1] [See *Histoire des Plantes*, 1865, p. 345, where all the passages here quoted will be found.]

wild saxifrages, which are allowed to grow wherever they like, and the rock strawberries, and Francescas,[1] which are coaxed to grow wherever there is a bit of rough ground for them, a bunch or two of pale pansies, or violets, I don't know well which, by the flower; but the entire company of them has a ragged, jagged, unpurpose-like look; extremely,—I should say,—demoralizing to all the little plants in their neighbourhood: and on gathering a flower, I find it is a nasty big thing, all of a feeble blue, and with two things like horns, or thorns, sticking out where its ears would be, if the pansy's frequently monkey face were underneath them. Which I find to be two of the leaves of its calyx "out of place," and, at all events, for their part, therefore, weedy, and insolent.

19. I perceive, farther, that this disorderly flower is lifted on a lanky, awkward, springless, and yet stiff flower-stalk; which is not round, as a flower-stalk ought to be,[2] but obstinately square, and fluted, with projecting edges, like a pillar run thin out of an iron-foundry for a cheap railway station. I perceive also that it has set on it, just before turning down to carry the flower, two little jaggy and indefinable leaves,—their colour a little more violet than the blossom.

These, and such undeveloping leaves, wherever they occur, are called "bracts" by botanists, a good word, from the Latin "bractea," meaning a piece of metal plate, so thin as to crackle. They seem always a little stiff, like bad parchment,—born to come to nothing—a sort of infinitesimal fairy-lawyer's deed. They ought to have been in my index,[3] under the head of leaves, and are frequent in flower structure,—never, as far as one can see, of the smallest use. They are constant, however, in the flower-stalk of the whole violet tribe.

[1] [See p. 315.]

[2] [Here, in the original edition, there was a reference to "vol. i. p. 268," *i.e.*, to the Index at the end of the first volume, now transferred to the end of the book: see below, p. 554.]

[3] [The reference to Bracts is now added: see p. 555.]

20. I perceive, farther, that this lanky flower-stalk, bending a little in a crabbed, broken way, like an obstinate person tired, pushes itself up out of a still more stubborn, nondescript, hollow angular, dog's-eared gaspipe of a stalk, with a section something like this,[1] but no bigger than  , with a quantity of ill-made and ill-hemmed leaves on it, of no describable leaf-cloth or texture,—not cressic[2] though the thing does altogether look a good deal like a quite uneatable old watercress); not salvian, for there's no look of warmth or comfort in them; not cauline, for there's no juice in them; not dryad, for there's no strength in them, nor apparent use: they seem only there, as far as I can make out, to spoil the flower, and take the good out of my garden bed. Nobody in the world could draw them, they are so mixed up together, and crumpled and hacked about, as if some ill-natured child had snipped them with blunt scissors, and an ill-natured cow chewed them a little afterwards and left them, proved for too tough or too bitter.

21. Having now sufficiently observed, it seems to me, this incongruous plant, I proceed to ask myself, over it, M. Figuier's question, "Qu'est ce que c'est qu'un Pensée?" Is this a violet—or a pansy—or a bad imitation of both?

Whereupon I try if it has any scent: and to my much surprise, find it has a full and soft one—which I suppose is what my gardener keeps it for! According to Dr. Lindley, then, it must be a violet! But according to M. Figuier,—let me see, do its middle petals bend up, or down?

I think I'll go and ask the gardener what *he* calls it.

22. My gardener, on appeal to him, tells me it is the "Viola Cornuta," but that he does not know himself if it is violet or pansy. I take my Loudon again,

[1] [This is Figure 24; referred to below, p. 411.]

[2] [This term (as also "salvian" and "cauline") had been explained in the Index to vol. i.: see now below, p. 556.]

and find there were fifty-three species of violets, known in his days, of which, as it chances, Cornuta is exactly the last.[1]

"Horned violet": I said the green things were *like* horns![2]—but what is one to say of, or to do to, scientific people, who first call the spur of the violet's petal, horn, and then its calyx points, horns, and never define a "horn" all the while!

Viola Cornuta, however, let it be; for the name does mean *some*thing, and is not false Latin. But whether violet or pansy, I must look farther to find out.

28. I take the *Flora Danica*, in which I at least am sure of finding whatever is done at all, done as well as honesty and care can; and look what species of violets it gives.

Nine, in the first ten volumes of it; four in their modern sequel (that I know of,—I have had no time to examine the last issues). Namely, in alphabetical order, with their present Latin, or tentative Latin, names; and in plain English, the senses intended by the hapless scientific people, in such their tentative Latin:—

| | | | | |
|---|---|---|---|---|
| (1) | Viola | Arvensis. | Field (Violet) . . . . . | No. 1748 |
| (2) | „ | Biflora. | Two-flowered . . . . . | 46 |
| (3) | „ | Canina. | Dog . . . . . | 1453 |
| (3B) | „ | Canina. | Var. Multicaulis (many-stemmed), a very singular sort of violet—if it were so! Its real difference from our dog-violet is in being pale blue, and having a golden centre . . | 2646 |
| (4) | „ | Hirta. | Hairy . . . . . | 618 |
| (5) | „ | Mirabilis. | Marvellous . . . . . | 1045 |
| (6) | „ | Montana. | Mountain . . . . . | 1329 |
| (7) | „ | Odorata. | Odorous . . . . . | 309 |
| (8) | „ | Palustris. | Marshy . . . . . | 83 |
| (9) | „ | Tricolor. | Three-coloured . . . . . | 623 |
| (9B) | „ | Tricolor. | Var. Arenaria, Sandy Three-coloured . | 2647 |
| (10) | „ | Elatior. | Taller . . . . . | 68 |
| (11) | „ | Epipsila. | (Heaven knows what: it is Greek, not Latin, and looks as if it meant something between a bishop and a short letter e) . . | 2405 |

[1] [*Encyclopædia of Plants*, vol. i. pp. 186–188.]
[2] [See above, § 18, p. 397.]

I next run down this list, noting what names we can keep, and what we can't; and what aren't worth keeping, if we could: passing over the varieties, however, for the present, wholly.

(1) Arvensis. Field-violet. Good.
(2) Biflora. A good epithet, but in false Latin. It is to be our Viola aurea, golden pansy.
(3) Canina. Dog. Not pretty, but intelligible, and by common use now classical. Must stay.
(4) Hirta. Late Latin slang for hirsuta, and always used of nasty places or nasty people; it shall not stay. The species shall be our Viola Seclusa,—Monk's violet—meaning the kind of monk who leads a rough life like Elijah's, or the Baptist's, or Esau's —in another kind. This violet is one of the loveliest that grows.
(5) Mirabilis. Stays so; marvellous enough, truly: not more so than all violets; but I am very glad to hear of scientific people capable of admiring anything.
(6) Montana. Stays so.
(7) Odorata. Not distinctive;—nearly classical, however. It is to be our Viola Regina, else I should not have altered it.
(8) Palustris. Stays so.
(9) Tricolor. True, but intolerable. The flower is the queen of the true pansies: to be our Viola Psyche.
(10) Elatior. Only a variety of our already accepted Cornuta.
(11) The last is, I believe, also only a variety of Palustris. Its leaves, I am informed in the text, are either "pubescent-reticulate-venose-subreniform," or "lato-cordate-repando-crenate"; and its stipules are "ovate-acuminate-fimbrio-denticulate." I do not wish to pursue the inquiry farther.

24. These ten species will include, noting here and there a local variety, all the forms which are familiar to us in Northern Europe, except only two;—these, as it singularly chances, being the Viola Alpium, noblest of all the wild pansies in the world, so far as I have seen or heard of them,—of which, consequently, I find no picture, nor notice, in any botanical work whatsoever; and the other, the rock-violet of our own Yorkshire hills.[1]

We have therefore, ourselves, finally then, twelve following species to study. I give them now all in their

[1] [This is another of the flowers seldom to be found except in Upper Teesdale: compare above, p. 285 *n.*]

accepted names and proper order,—the reasons for occasional difference between the Latin and English name will be presently given.

| | | | |
|---|---|---|---|
| (1) | Viola | Regina. | Queen violet. |
| (2) | „ | Psyche. | Ophelia's pansy. |
| (3) | „ | Alpium. | Freneli's pansy. |
| (4) | „ | Aurea. | Golden violet. |
| (5) | „ | Montana. | Mountain violet. |
| (6) | „ | Mirabilis. | Marvellous violet. |
| (7) | „ | Arvensis. | Field violet. |
| (8) | „ | Palustris. | Marsh violet. |
| (9) | „ | Seclusa. | Monk's violet. |
| (10) | „ | Canina. | Dog violet. |
| (11) | „ | Cornuta. | Cow violet. |
| (12) | „ | Rupestris. | Crag violet. |

25. We will try, presently, what is to be found out of useful, or pretty, concerning all these twelve violets; but must first find out how we are to know which are violets indeed, and which, pansies.

Yesterday, after finishing my list, I went out again to examine Viola Cornuta a little closer, and pulled up a full grip of it by the roots, and put it in water in a wash-hand basin, which it filled like a truss of green hay.

Pulling out two or three separate plants, I find each to consist mainly of a jointed stalk of a kind I have not yet described,—roughly, some two feet long altogether (accurately, one 1 ft. 10½ in.; another, 1 ft. 10 in.; another, 1 ft. 9 in.—but all these measures taken without straightening, and therefore about an inch short of the truth), and divided into seven or eight lengths by clumsy joints where the mangled leafage is knotted on it; but broken a little out of the way at each joint, like a rheumatic elbow that won't come straight, or bend farther; and—which is the most curious point of all in it—it is thickest in the middle, like a viper, and gets quite thin to the root

and thin towards the flower; also the lengths between the joints are longest in the middle: here I give them in inches, from the root upwards, in a stalk taken at random.

| | |
|---|---|
| 1st (nearest root) . . . . | 0¾ |
| 2nd . . . . . | 0¾ |
| 3rd . . . . . | 1½ |
| 4th . . . . . | 1¾ |
| 5th . . . . . | 3 |
| 6th . . . . . | 4 |
| 7th . . . . . | 3¼ |
| 8th . . . . . | 3 |
| 9th . . . . . | 2¼ |
| 10th . . . . . | 1½ |
| | 1 ft. 9¾ in. |

But the thickness of the joints and length of terminal flower stalk bring the total to two feet and about an inch over. I dare not pull it straight, or should break it, but it overlaps my two-foot rule considerably, and there are two inches besides of root, which are merely underground stem, very thin and wretched, as the rest of it is merely root above ground, very thick and bloated. (I begin actually to be a little awed at it, as I should be by a green snake—only the snake would be prettier.) The flowers also, I perceive, have not their two horns regularly set *in*, but the five spiky calyx-ends stick out between the petals—sometimes three, sometimes four, it may be all five up and down—and produce variously fanged or forked effects, feebly ophidian or diabolic. On the whole, a plant entirely mismanaging itself,—reprehensible and awkward, with taints of worse than awkwardness; and clearly, no true "species," but only a link.* And it really is, as you will find presently, a link in two directions; it is half violet, half pansy, a "cur" among the Dogs, and a thoughtless thing among the thoughtful. And being so, it is also a link between the entire violet tribe and the Runners—pease, strawberries,

* See *Deucalion*, vol. ii., chap. i. § 18 [Vol. XXVI.].

UNIV. OF
CALIFORNIA

and the like, whose glory is in their speed; but a violet has no business whatever to run anywhere, being appointed to stay where it was born, in extremely contented (if not secluded) places. "Half-hidden from the eye?"[1]—no; but desiring attention, or extension, or corpulence, or connection with anybody else's family, still less.

26. And if, at the time you read this, you can run out and gather a *true* violet, and its leaf, you will find that the flower grows from the very ground, out of a cluster of heart-shaped leaves, becoming here a little rounder, there a little sharper, but on the whole heart-shaped, and that is the proper and essential form of the violet leaf. You will find also that the flower has five petals; and being held down by the bent stalk, two of them bend back and up, as if resisting it; two expand at the sides; and one, the principal, grows downwards, with its attached spur behind. So that the front view of the flower must be *some* modification of this typical arrangement, Fig. M (for middle form[2]). Now the statement above quoted from Figuier, § 16, means, if he had been able to express himself, that the two lateral petals in the violet are directed downwards, Fig. 25, A, and in the pansy upwards, Fig. 25, C. And that, in the main, is true, and to be fixed well and clearly in your mind. But in the real orders, one flower passes into the other through all kinds of intermediate positions of petal, and the plurality of species are of the middle type, Fig. 25, B.*

Fig. 25

27. Next, if you will gather a real pansy *leaf*, you will find it—not heart-shape in the least, but sharp oval or spear-shape, with two deep cloven lateral flakes at its springing from the stalk, which, in ordinary aspect, give the

* I am ashamed to give so rude outlines; but every moment now is valuable to me: careful outline of a dog-violet is given in Plate XXVI.

[1] [See above, p. 389.]

[2] [That is, the middle form of the three; subsequently, however, referred to as Fig. 25, B.]

plant the haggled and draggled look I have been vilifying it for. These, and such as these, "leaflets at the base of other leaves" (Balfour's Glossary[1]), are called by botanists "stipules." I have not allowed the word yet, and am doubtful of allowing it, because it entirely confuses the student's sense of the Latin "stipula" (see above, vol. i., chap. viii., § 27, p. 317), doubly and trebly important in its connection with "stipulor," not noticed in that paragraph, but readable in your large Johnson;[2] we shall have more to say of it when we come to "straw" itself.[3]

28. In the meantime, one *may* think of these things as stipulations for leaves, not fulfilled, or "stumps" or "sumphs" of leaves! But I think I can do better for them. We have already got the idea of *crested* leaves (see vol. i., Plate XIII., p. 290); now, on each side of a knight's crest, from earliest Etruscan times down to those of the Scalas, the fashion of armour held, among the nations who wished to make themselves terrible in aspect, of putting cut plates or "bracts" of metal, like dragons' wings, on each side of the crest. I believe the custom never became Norman or English; it is essentially Greek, Etruscan, or Italian,—the Norman and Dane always wearing a practical cone (see the coins of Canute), and the Frank or English knights the severely plain beavered helmet; the Black Prince's at Canterbury, and Henry V.'s at Westminster, are kept hitherto by the great fates for us to see.[4] But the Southern knights constantly wore these lateral dragon's wings; and if I can find their special name, it may perhaps be substituted with advantage for "stipule"; but I have not wit enough by me just now to invent a term.

[1] [See p. 681 of J. H. Balfour's *Manual of Botany*, 1860.]

[2] ["Their bargains (in the Isle of Man) are compleated, and confirmed, by the giving and taking of as mean a matter as a straw, as of old also, *per traditionem stipulæ*; from whence the phrase of *stipulation* came" (Sadler, *Rights of the Kingdom*, 1649, p. 175; quoted *s.v.* "Stipulate").]

[3] [This point, however, was not reached.]

[4] [Illustrations of the helmet, shield, and saddle of Henry V., as suspended over his tomb, are given in Dean Stanley's *Memorials of Westminster Abbey*, p. 131; and so also of the helmet, etc., of the Black Prince in the same author's *Historical Memorials of Canterbury*, p. 154.]

29. Whatever we call them, the things themselves are, throughout all the species of violets, developed in the running and weedy varieties, and much subdued in the beautiful ones; and generally the pansies have them large, with spear-shaped central leaves; and the violets small, with heart-shaped leaves, for more effective decoration of the ground. I now note the characters of each species in their above given order.

30. (I.) VIOLA REGINA. Queen Violet. Sweet Violet. "Viola Odorata," L.,[1] *Flora Danica*, and Sowerby. The latter draws it with golden centre and white base of lower petal; the *Flora Danica*, all purple. It is sometimes altogether white. It is seen most perfectly for setting off its colour, in group with primrose,—and most luxuriantly, so far as I know, in hollows of the Savoy limestones, associated with the pervenke, which embroiders and illumines them all over. I believe it is the earliest of its race, sometimes called "Martia," March violet. In Greece and South Italy even a flower of the winter.

"The Spring is come, the violet's *gone*,
The first-born child of the early sun.
With us, she is but a winter's flower;
The snow on the hills cannot blast her bower,
And she lifts up her dewy eye of blue
To the youngest sky of the selfsame hue.

And when the Spring comes, with her host
Of flowers, that flower beloved the most
Shrinks from the crowd that may confuse
Her heavenly odour, and virgin hues.

Pluck the others, but still remember
Their herald out of dim December,—
*The morning star* of all the flowers,
The pledge of daylight's lengthened hours,
Nor, midst the roses, e'er forget
The virgin, virgin violet."*

* A careless bit of Byron's (the last song but one in the "Deformed Transformed"); but Byron's most careless work is better, by its innate energy, than other people's most laboured. I suppress, in some doubts

[1] [*i.e.*, Linnæus. See in Sowerby, vol. ii. p. 14 (3rd ed.).]

81. It is the queen, not only of the violet tribe, but of all low-growing flowers, in sweetness of scent—variously applicable and serviceable in domestic economy:—the scent of the lily of the valley seems less capable of preservation or use.

But, respecting these perpetual beneficences and benignities of the sacred, as opposed to the malignant, herbs, whose poisonous power is for the most part restrained in them, during their life, to their juices or dust, and not allowed sensibly to pollute the air, I should like the scholar to read pp. 558–559 of the index,[1] and then to consider with himself what a grotesquely warped and gnarled thing the modern scientific mind is, which fiercely busies itself in venomous chemistries that blast every leaf from the forests ten miles round; and yet cannot tell us, nor even think of telling us, nor does even one of its pupils think of asking it all the while, how a violet throws off her perfume!—far less, whether it might not be more wholesome to "treat" the air which men are to breathe in masses, by administration of vale-lilies and violets, instead of charcoal and sulphur!

The closing sentence of the first index just now referred to—p. 560—should also be re-read; it was the sum of a chapter I had in hand at that time on the Substances and Essences of Plants—which never got finished;—and in trying to put it into small space, it has become obscure: the terms "logically inexplicable" meaning that no words or process of comparison will define scents, nor do any traceable modes of sequence or relation connect them; each is an independent power, and gives a separate impression to the senses. Above all, there is no logic of

about my "digamma," notes on the Greek violet and the Ion of Euripides;—which the reader will perhaps be good enough to fancy a serious loss to him, and supply for himself.[2]

[1] [The words "read" and "the index" are here substituted for "re-read" and "vol. i."; and so, eleven lines below, "index" for "volume," as the index is now transferred to the end of the book.]

[2] [The reader may be referred, however, to Vol. XXI. p. 112.]

pleasure, nor any assignable reason for the difference, between loathsome and delightful scent, which makes the fungus foul and the vervain sacred: but one practical conclusion I (who am in all final ways the most prosaic and practical of human creatures)[1] do very solemnly beg my readers to meditate; namely, that although not recognized by actual offensiveness of scent, there is no space of neglected land which is not in some way modifying the atmosphere of *all the world*,—it may be, beneficently, as heath and pine,—it may be, malignantly, as Pontine marsh or Brazilian jungle; but, in one way or another, for good and evil constantly, by day and night, the various powers of life and death in the plants of the desert are poured into the air, as vials of continual angels: and that no words, no thoughts can measure, nor imagination follow, the possible change for good which energetic and tender care of the wild herbs of the field and trees of the wood might bring, in time, to the bodily pleasure and mental power of Man.

32. (II.) VIOLA PSYCHE. Ophelia's Pansy.[2]

The wild heart's-ease of Europe; its proper colour an exquisitely clear purple in the upper petals, gradated into deep blue in the lower ones; the centre, gold. Not larger than a violet, but perfectly formed, and firmly set in all its petals. Able to live in the driest ground; beautiful in the coast sand-hills of Cumberland, following the wild geranium and burnet rose: and distinguished thus by its power of life, in waste and dry places, from the violet, which needs kindly earth and shelter.

Quite one of the most lovely things that Heaven has made, and only degraded and distorted by any human interference; the swollen varieties of it produced by cultivation being all gross in outline and coarse in colour by comparison.

It is badly drawn even in the *Flora Danica*, No. 628,

[1] [Compare what Ruskin says of his "intensely practical and matter-of-fact character" in *Fors Clavigera*, Letter 37, § 2. See also *Præterita*, ii. § 197.]

[2] [*Hamlet*, Act iv. sc. 5: "and there is pansies, that's for thoughts" (hence Ruskin's name Psyche). Compare *Fors Clavigera*, Letter 94, § 11.]

considered there apparently as a species escaped from gardens; the description of it being as follows:—

"Viola tricolor hortensis repens, flore purpureo et cœruleo, C. B. P., 199." (I don't know what C. B. P. means.[1]) "Passim, juxta villas."

"Viola tricolor, caule triquetro diffuso, foliis oblongis incisis, stipulis pinnatifidis," Linn. *Systema Naturæ*, 185.

33. "Near the country farms"—does the Danish botanist mean?—the more luxuriant weedy character probably acquired by it only in such neighbourhood; and, I suppose, various confusion and degeneration possible to it beyond other plants when once it leaves its wild home. It is given by Sibthorp[2] from the Trojan Olympus, with an exquisitely delicate leaf; the flower described as "triste et pallide violaceus," but coloured in his plate full purple; and as he does not say whether he went up Olympus to gather it himself, or only saw it brought down by the assistant whose lovely drawings are yet at Oxford, I take leave to doubt his epithets. That this should be the only Violet described in a *Flora Græca* extending to ten folio volumes, is a fact in modern scientific history which I must leave the Professor of Botany and the Dean of Christ Church to explain.

34. The English varieties seem often to be yellow in the lower petals (see Sowerby's plate, 1287 of the old edition[3]); crossed, I imagine, with Viola Aurea (but see under Viola Rupestris, No. 12[4]); the names, also, varying

[1] [The contraction "C. B. P." in *Flora Danica* is not explained. It stands, however, for the *Pinax* of Caspar Bauhin, a work which was the universal text-book of botany for nearly a century. Thus "C. B. P., 199" means "page 199" (where the violet is described) of the work in question (Basileæ, 1623).]

[2] [See *Flora Græca, sive Plantarum rariorum historia quas in provinciis aut insulis Græci legit, investigavit, et depingi curavit J. Sibthorp*, vol. iii. pp. 17, 18. John Sibthorp (1758–1796), M.D., Professor of Botany at Oxford. On his expeditions to Greece, Ferdinand Bauer accompanied him as artist. He bequeathed to the University all the materials which he had collected for his *Flora Græca*, together with funds for publishing it and for other purposes. The work was issued between the years 1806 and 1840 in ten volumes, with 966 plates, the entire cost of it exceeding £30,000. Bauer's drawings are preserved in the library of the Botanic Garden at Oxford, where they can be seen on application. Ruskin gives some particulars about the book in *Fors Clavigera*, Letter 50, § 14.]

[3] [In vol. xviii., the first edition.]

[4] [See below, p. 413.]

between tricolor and bicolor—with no note anywhere of the three colours, or two colours, intended!

The old English names are many.—"Love in idleness," —making Lysander, as Titania, much wandering in mind;[1] and for a time mere "Kits run the street" (or run the wood?)—"Call me to you" (Gerarde, ch. 299, Sowerby, No. 178), with "Herb Trinity," from its three colours, blue, purple, and gold, variously blended in different countries. "Three faces under a hood" describes the English variety only. Said to be the ancestress of all the florists' pansies, but this I much doubt, the next following species being far nearer the forms most chiefly sought for.

85. (III.) VIOLA ALPINA. "Freneli's Pansy"—my own name for it,[2] from Gotthelf's Freneli, in *Ulric the Farmer;* the entirely pure and noble type of the Bernese maid, wife, and mother.

The pansy of the Wengern Alp in specialty, and of the higher, but still rich, Alpine pastures. Full dark-purple; at least an inch across the expanded petals; I believe, the "Mater Violarum" of Gerarde; and true black violet of Virgil,[3] remaining in Italian "Viola Mammola" (Gerarde, ch. 298).

86. (IV.) VIOLA AUREA. Golden Violet. Biflora usually; but its brilliant yellow is a much more definite characteristic; and needs insisting on, because there is a "Viola lutea" which is not yellow at all; named so by the garden-florists. My Viola aurea is the Rock-violet of the Alps; one of the bravest, brightest, and dearest of little flowers. The following notes upon it, with its summer companions, a little corrected from my diary of 1877,[4] will enough characterize it.

"*June 7th.*—The cultivated meadows now grow only

[1] [See above, p. 393, and compare Vol. XV. p. 498.]

[2] [Compare *Fors Clavigera*, Letters 91 (§ 4) and 94 (§ 11). Ruskin had intended to follow up the translation of *Ulric the Farm Servant*, edited by him (see a later volume of this edition), with its sequel *Ulric the Farmer*.]

[3] [*Eclogues*, x. 39 ("nigræ violæ").]

[4] [See some further extracts from this diary given in the Introduction, above, p. xxxvi.]

dandelions—in frightful quantity too; but, for wild ones, primula, bell gentian, golden pansy, and anemone,—Primula farinosa in mass, the pansy pointing and vivifying in a petulant sweet way, and the bell gentian here and there deepening all,—as if indeed the sound of a deep bell among lighter music.

"Counted in order, I find the effectively constant flowers are eight;* namely,

"1. The golden anemone, with richly cut large leaf; primrose colour, and in masses like primrose, studded through them with bell gentian, and dark purple orchis.

"2. The dark purple orchis, with bell gentian in equal quantity, say six of each in square yard, broken by sparklings of the white orchis and the white grass flower; the richest piece of colour I ever saw, touched with gold by the geum.

"3 and 4. These will be white orchis and the grass flower.†

"5. Geum—everywhere, in deep, but pure, gold, like pieces of Greek mosaic.

"6. Soldanella, in the lower meadows, delicate, but not here in masses.

"7. Primula Alpina, divine in the rock clefts, and on the ledges changing the grey to purple,—set in the dripping caves with

"8. Viola (pertinax—pert); I want a Latin word for various studies—failures all—to express its saucy little stuck-up way, and exquisitely trim peltate leaf. I never saw such a lovely perspective line as the pure front leaf profile. Impossible also to get the least of the spirit of its lovely dark brown fibre markings. Intensely golden these dark fibres, just browning the petal a little between them."

* Nine; I see that I missed count of P. farinosa, the most abundant of all.

† "A feeble little quatrefoil—growing one on the stem, like a Parnassia, and looking like a Parnassia that had dropped a leaf. I think it drops one of its own four, mostly, and lives as three-fourths of itself, for most of its time. Stamens pale gold. Root-leaves, three or four, grass-like; growing among the moist moss chiefly."

And again in the defile of Gondo, I find "Viola (saxatilis?) name yet wanted;—in the most delicate studding of its round leaves, like a small fern more than violet, and bright sparkle of small flowers in the dark dripping hollows. Assuredly delights in shade and distilling moisture of rocks."

I found afterwards a much larger yellow pansy on the Yorkshire high limestones; with vigorously black crowfoot marking on the lateral petals.

87. (V.) VIOLA MONTANA. Mountain Violet.

*Flora Danica*, 1829. Linnæus, No. 13, "Caulibus erectis, foliis cordato-lanceolatis, floribus serioribus apetalis," *i.e.*, on erect stems, with leaves long heart-shape, and its later flowers without petals—not a word said of its earlier flowers which have got those unimportant appendages! In the plate of the *Flora* it is a very perfect transitional form between violet and pansy, with beautifully firm and well-curved leaves, but the colour of blossom very pale. "In subalpinis Norvegiæ passim," all that we are told of it, means, I suppose, in the lower Alpine pastures of Norway; in the *Flora Suecica*, p. 306, "habitat in Lapponica, juxta Alpes."

88. (VI.) VIOLA MIRABILIS. *Flora Danica*, 1045. A small and exquisitely formed flower in the balanced cinquefoil intermediate between violet and pansy, but with large and superbly curved and pointed leaves. It is a mountain violet, but belonging rather to the mountain woods than meadows. "In sylvaticis in Toten, Norvegiæ."

Loudon, 3056, "Broad-leaved: Germany."

Linnæus, *Flora Suecica*, 789, says that the flowers of it which have perfect corolla and full scent often bear no seed, but that the later "cauline" blossoms, without petals, are fertile. "Caulini vero apetali fertiles sunt, et seriores. Habitat passim Upsaliæ."

I find this, and a plurality of other species, indicated by Linnæus as having triangular stalks, "caule triquetro," meaning, I suppose, the kind sketched in Figure 24 above [p. 398].

39. (VII.) VIOLA ARVENSIS. Field Violet. *Flora Danica*, 1748. A coarse running weed; nearly like Viola Cornuta, but feebly lilac and yellow in colour. In dry fields, and with corn.

*Flora Suecica*, 791; under titles of Viola "tricolor" and "bicolor arvensis," and Herba Trinitatis. "Habitat ubique in *sterilibus* arvis. Planta vix datur in qua evidentius perspicitur generationis opus, quam in hujus cavo apertoque stigmate."

It is quite undeterminable, among present botanical instructors, how far this plant is only a rampant and over-indulged condition of the true pansy (Viola Psyche); but my own scholars are to remember that the true pansy is full purple and blue with golden centre; and that the disorderly field varieties of it, if indeed not scientifically distinguishable, are entirely separate from the wild flower by their scattered form and faded or altered colour. I follow the *Flora Danica* in giving them as a distinct species.

40. (VIII.) VIOLA PALUSTRIS. Marsh Violet. *Flora Danica*, 88. As there drawn, the most finished and delicate in form of all the violet tribe; warm white, streaked with red; and as pure in outline as an oxalis, both in flower and leaf: it is like a violet imitating oxalis and anagallis.

In the *Flora Suecica*, the petal-markings are said to be black; in "Viola lactea" a connected species (Sowerby, 45), purple. Sowerby's plate of it under the name "palustris" is pale purple veined with darker; and the spur is said to be "honey-bearing," which is the first mention I find of honey in the violet. The habitat given, sandy and turfy heaths. It is said to grow plentifully near Croydon.

Probably, therefore, a violet belonging to the chalk, on which nearly all herbs that grow wild—from the grass to the bluebell—are singularly sweet and pure. I hope some of my botanical scholars will take up this question of the effect of different rocks on vegetation, not so much in bearing

different species of plants, as different characters of each species.*

41. (IX.) VIOLA SECLUSA. Monk's Violet. "Hirta," *Flora Danica*, 618, "In fruticetis raro." A true wood violet, full but dim in purple. Sowerby, 894, makes it paler. The leaves very pure and severe in the Danish one;—longer in the English. "Clothed on both sides with short, dense, hoary hairs."

Also belongs to chalk or limestone only (Sowerby).

(X.) VIOLA CANINA. Dog Violet. I have taken it for analysis in my two plates, because its grace of form is too much despised, and we owe much more of the beauty of spring to it, in English mountain ground, than to the Regina.

(XI.) VIOLA CORNUTA. Cow Violet. Enough described already.

(XII.) VIOLA RUPESTRIS. Crag Violet. On the high limestone moors of Yorkshire, perhaps only an English form of Viola Aurea, but so much larger, and so different in habit—growing on dry breezy downs, instead of in dripping caves—that I allow it, for the present, separate name and number.†

42. "For the present," I say all this work in *Proserpina* being merely tentative, much to be modified by future students, and therefore quite different from that of *Deucalion*, which is authoritative as far as it reaches, and will stand out like a quartz dyke, as the sandy speculations of modern gossiping geologists get washed away.

But in the meantime, I must again solemnly warn my girl-readers against all study of floral genesis and digestion. How far flowers invite, or require, flies to interfere

* The great work of Lecoq, *Geographie Botanique*, is of priceless value; but treats all on too vast a scale for our purposes.[1]

† It is, I believe, Sowerby's Viola Lutea, 721 of the old edition, there painted with purple upper petals; but he says in the text, "Petals either all yellow, or the two uppermost are of a blue purple, the rest yellow with a blue tinge: very often the whole are purple."

[1] [*Études sur la géographie botanique de l'Europe et en particulier sur la végetation du plateau central de la France*, 9 vols., 1854–1858.]

in their family affairs—which of them are carnivorous[1]—and what forms of pestilence or infection are most favourable to some vegetable and animal growths,—let them leave the people to settle who like, as Toinette says of the Doctor in the *Malade Imaginaire*—"y mettre le nez."[2] I observe a paper in the last *Contemporary Review*,[3] announcing for a discovery patent to all mankind that the colours of flowers were made "to attract insects"!* They will next hear that the rose was made for the canker, and the body of man for the worm.

43. What the colours of flowers, or of birds, or of precious stones, or of the sea and air, and the blue mountains, and the evening and the morning, and the clouds of Heaven, were given for—they only know who can see them and can feel, and who pray that the sight and the love of them may be prolonged, where cheeks will not fade, nor sunsets die.

44. And now, to close, let me give you some fuller account of the reasons for the naming of the order to which the violet belongs, "Cytherides."

You see that the Uranides[4] are, as far as I could so gather them, of the pure blue of the sky; but the Cytherides of altered blue;—the first, Viola, typically purple; the second, Veronica, pale blue with a peculiar light; the third, Giulietta, deep blue, passing strangely into a subdued green before and after the full life of the flower.

All these three flowers have great strangenesses in them, and weaknesses; the Veronica most wonderful in its connection with the poisonous tribe of the foxgloves; the

* Did the wretch never hear bees in a lime tree then, or ever see one on a star gentian?

---

[1] [See above, pp. 219, 391.]

[2] [Act i. sc. 2: "Ai-je bien fait de la bile?" "Ma foi! je ne me mêle point de ces affaires-là: c'est à Monsieur Fleurant à y mettre le nez, puisqu'il en a le profit."]

[3] ["The Relation of Insects to Flowers," by Dr. Asa Gray, in the *Contemporary Review*, April 1882, vol. 41, pp. 598 *seq.* Compare a letter in *Hortus Inclusus* in which Ruskin says he has "been made miserable by a paper of Sir J. Lubbock's on flowers and insects."]

[4] [See above, p. 354.]

Giulietta, alone among flowers in the action of the shielding leaves; and the Viola, grotesque and inexplicable in its hidden structure, but the most sacred of all flowers to earthly and daily Love, both in its scent and glow.

Now, therefore, let us look completely for the meaning of the two leading lines,[1]—

> "Sweeter than the lids of Juno's eyes,
> Or Cytherea's breath."

45. Since, in my present writings, I hope to bring into one focus the pieces of study fragmentarily given during past life, I may refer my readers to the first chapter of the *Queen of the Air*[2] for the explanation of the way in which all great myths are founded, partly on physical, partly on moral fact,—so that it is not possible for persons who neither know the aspect of nature, nor the constitution of the human soul, to understand a word of them. Naming the Greek Gods, therefore, you have first to think of the physical power they represent. When Horace calls Vulcan "Avidus," he thinks of him as the power of Fire; when he speaks of Jupiter's red right hand, he thinks of him as the power of rain with lightning; and when Homer speaks of Juno's dark eyes,[3] you have to remember that she is the softer form of the rain power, and to think of the fringes of the rain-cloud across the light of the horizon. Gradually the idea becomes personal and human in the "Dove's eyes within thy locks,"* and "Dove's eyes by the rivers of waters" of the Song of Solomon.[4]

* Septuagint, "the eyes of doves out of thy silence." Vulgate, "the eyes of doves, besides that which is hidden in them." Meaning—the *dim* look of love, beyond all others in sweetness.

---

[1] [See above, p. 393.]

[2] [See Vol. XIX. pp. 296–303.]

[3] [Horace: *Odes*, iii. 4, 59 ("Hinc avidus stetit Volcanus"); *Odes*, i. 2, 2 ("Pater rubente dextera"). Homer's epithet for Hera is *βοῶπις*, "ox-eyed," which Ruskin interprets as therefore "dark-eyed."]

[4] [The Vulgate and Septuagint (Song of Solomon iv. 1) have respectively:—

"Oculi hic columbarum, absque eo quod intrinsecus latet."

*ὀφθαλμοί σου περιστεραί, ἐκτὸς τῆς σιωπήσεώς σου·*

*Ibid.*, v. 12:—

"Oculi ejus sicut columbæ super rivulos aquam."

*ὀφθαλμοὶ αὐτοῦ ὡς περιστεραὶ ἐπὶ πληρώματα ὑδάτων.*]

46. "Or Cytherea's breath,"—the two thoughts of softest glance, and softest kiss, being thus together associated with the flower: but note especially that the Island of Cythera was dedicated to Venus because it was the chief, if not the only Greek island, in which the purple fishery of Tyre was established;[1] and in our own minds should be marked not only as the most southern fragment of true Greece, but the virtual continuation of the chain of mountains which separate the Spartan from the Argive territories, and are the natural home of the brightest Spartan and Argive beauty which is symbolized in Helen.

47. And, lastly, in accepting for the order this name of Cytherides, you are to remember the names of Viola and Giulietta, its two limiting families, as those of Shakespeare's two most loving maids—the two who love simply, and to the death: as distinguished from the greater natures in whom earthly Love has its due part, and no more; and farther still from the greatest, in whom the earthly love is quiescent, or subdued, beneath the thoughts of duty and immortality.

It may be well quickly to mark for you the levels of loving temper in Shakespeare's maids and wives, from the greatest to the least.[2]

48. (1.) Isabel. All earthly love, and the possibilities of it, held in absolute subjection to the laws of God, and the judgments of His will. She is Shakespeare's only "Saint."[3] Queen Catherine, whom you might next think of, is only an ordinary woman of trained religious temper:—her maid of honour gives Wolsey a more Christian epitaph.[4]

(2.) Cordelia. The earthly love consisting in diffused

[1] [The temple of Venus in Cythera was founded by the Phœnicians (Herodotus, i. 105); they were probably attracted to the island by the shell-fish, which yielded so fine a purple dye that the island is said to have been known in earlier times as the Purple Island (Aristotle, referred to by Stephanus Byzant., *s.v.* *κύθηρα*, and Pliny, *Nat. Hist.*, iv. 56).]

[2] [For an earlier study of Shakespeare's heroines, see *Sesame and Lilies*, §§ 57, 58 (Vol. XVIII. pp. 112–114).]

[3] [So Lucio to Isabella: "I hold you as a thing ensky'd and sainted" (*Measure for Measure*, Act i. sc. 4, 34).]

[4] [See *King Henry VIII.*, Act iv. sc. ii.; but Ruskin, writing from memory, confuses Patience, the queen's woman, with Griffith, her gentleman-usher.]

compassion of the universal spirit; not in any conquering, personally fixed, feeling.

> "Mine enemy's dog,
> Though he had bit me, should have stood that night
> Against my fire." [1]

These lines are spoken in her hour of openest direct expression; and are *all* Cordelia.

Shakespeare clearly does not mean her to have been supremely beautiful in person; it is only her true lover who calls her "fair" and "fairest"—and even that, I believe, partly in courtesy, after having the instant before offered her to his subordinate duke; and it is only *his* scorn of her which makes France fully care for her.

> "Gods, Gods, 'tis strange that from their cold neglect
> My love should kindle to inflamed respect!"

Had she been entirely beautiful, he would have honoured her as a lover should, even before he saw her despised; nor would she ever have been so despised—or by her father, misunderstood. Shakespeare himself does not pretend to know where her girl-heart was,—but I should like to hear how a great actress would say the "Peace be with Burgundy!"

(8.) Portia. The maidenly passion now becoming great, and chiefly divine in its humility, is still held absolutely subordinate to duty; no thought of disobedience to her dead father's intention is entertained for an instant, though the temptation is marked as passing, for that instant, before her crystal strength.[2] Instantly, in her own peace, she thinks chiefly of her lover's;—she is a perfect Christian wife in a moment, coming to her husband with the gift of perfect Peace,—

> "Never shall you lie by Portia's side
> With an unquiet soul." [3]

---

[1] [*King Lear*, Act iv. sc. 7, 37. The following references are to Act i. sc. 1, 286, 253; Act i. sc. 1, 257; Act i. sc. 1, 250.]

[2] [See *The Merchant of Venice*, Act iii. sc. 2 (Portia to Bassano):—

> "I could teach you
> How to choose right, but I am then forsworn;
> So will I never be: so you may miss me;
> But if you do, you'll make me wish a sin,
> That I had been forsworn."]

[3] ["On one occasion Ruskin denounced warmly Mr. Brandram, the Shakespeare reciter, because in those lines in the *Merchant of Venice* (Act iii. sc. 2), he had, to

She is highest in intellect of all Shakespeare's women, and this is the root of her modesty; her "unlettered girl" is like Newton's simile of the child on the sea-shore.[1] Her perfect wit and stern judgment are never disturbed for an instant by her happiness; and the final key to her character is given in her silent and slow return from Venice, where she stops at every wayside shrine to pray.[2]

(4.) Hermione. Fortitude and Justice personified, with unwearying affection. She is Penelope, tried by her husband's fault as well as error.[3]

(5.) Virgilia.[4] Perfect type of wife and mother, but without definiteness of character, nor quite strength of intellect enough entirely to hold her husband's heart. Else, she had saved him: he would have left Rome in his wrath—but not her. Therefore, it is his mother only who bends him: but she cannot save.

(6.) Imogen. The ideal of grace and gentleness; but weak; enduring too mildly, and forgiving too easily. But the piece is rather a pantomime than play, and it is impossible to judge of the feelings of St. Columba, when she must leave the stage in half a minute after mistaking the headless clown for headless Arlecchino.[5]

(7.) Desdemona, Ophelia, Rosalind. They are under different conditions from all the rest, in having entirely heroic and faultless persons to love.[6] I can't class them, therefore, —fate is too strong, and leaves them no free will.

propitiate Mrs. Grundy, altered the word 'lie' to 'stay.' For, as Ruskin said, the lines as Shakespeare wrote them gave a perfect picture of the utter trust of husband and wife reposing side by side, without a thought of anything beyond" ("Ruskin at Corpus," by C. P., in the *Pelican Record*, vol. ii. p. 136).]

[1] [Act iii. sc. 2, 161 ("an unlesson'd girl, unschool'd, unpractised"). For Newton's simile, see Vol. XVIII. p. 126.]

[2] [Act v. sc. 1, 30, 31.]

[3] [Ruskin, in his copy, here writes in the margin: "If, one by one, you wedded all the world." See *A Winter's Tale*, Act v. sc. 1, 13–16.]

[4] [For other references to Virgilia in *Coriolanus*, see Vol. XVIII. p. 113 *n*.]

[5] [See *Cymbeline*, Act iv. sc. 2, where Imogen mistakes the dead body of Cloten for Posthumus. Ruskin, in pressing the pantomimic character of the play, makes Cloten the Clown, Posthumus the Harlequin, and the dove-like Imogen (called in the text St. Columba) the Columbine.]

[6] [Ruskin here gives up his earlier generalisation that "Shakespeare has not one entirely heroic person": see *Sesame and Lilies*, § 56 (Vol. XVIII. p. 112).]

(8.) Perdita, Miranda. Rather mythic visions of maiden beauty than mere girls.

(9.) Viola and Juliet. Love the ruling power in the entire character: wholly virginal and pure, but quite earthly, and recognizing no other life than his own. Viola is, however, far the noblest. Juliet will die unless Romeo loves *her:* "If he be wed, the grave is like to be my wedding bed;"[1] but Viola is ready to die for the happiness of the man who does *not* love her; faithfully doing his messages to her rival, whom she examines strictly for his sake. It is not in envy that she says, "Excellently done,—if God did all."[2] The key to her character is given in the least selfish of all lover's songs, the one to which the Duke bids her listen:—

> "Mark it, Cesario,—it is old and plain,
> The spinsters and the knitters in the sun,
> And the free maids, that *weave their thread with bones,*
> Do use to chaunt it."

(They, the unconscious Fates, weaving the fair vanity of life with death); and the burden of it is—

> "My part of Death, no one so true
> Did share it."

Therefore she says, in the great first scene, "Was not *this* love indeed?" and in the less heeded closing one, her heart then happy with the knitters in the *sun,*

> "And all those sayings will I over-swear,
> And all those swearings[3] keep as true in soul
> As doth that orbed continent the Fire
> That severs day from night."

---

[1] [Act i. sc. 5, 137.]

[2] [*Twelfth Night,* Act i. sc. 5, 255. For the other passages, see Act ii. sc. 4, 44 *seq.*; *ibid.*, 117; Act v. sc. 1, 276.]

[3] [Ruskin in his copy here notes: "*Confer* Perdita giving her hand:—

> 'Your hand, my Perdita: so turtles pair
> That never mean to part.
> *Per.* I'll swear for 'em.'"

See *Winter's Tale,* Act iv. sc. 3, 153.]

Or, at least, did once sever day from night,—and perhaps does still in Illyria. Old England must seek new images for her loves from gas and electric sparks,—not to say furnace fire.

I am obliged, by press of other work, to set down these notes in cruel shortness: and many a reader may be disposed to question utterly the standard by which the measurement is made. It will not be found, on reference to my other books, that they encourage young ladies to go into convents; or undervalue the dignity of wives and mothers.[1] But, as surely as the sun *does* sever day from night, it will be found always that the noblest and loveliest women are dutiful and religious by continual nature; and their passions are trained to obey them, like their dogs. Homer, indeed, loves Helen with all his heart, and restores her, after all her naughtiness, to the queenship of her household; but he never thinks of her as Penelope's equal, or Iphigenia's. Practically, in daily life, one often sees married women as good as saints; but rarely, I think, unless they have a good deal to bear from their husbands. Sometimes also, no doubt, the husbands have some trouble in managing St. Cecilia or St. Elizabeth; of which questions I shall be obliged to speak more seriously in another place:[2] content, at present, if English maids know better, by Proserpina's help, what Shakespeare meant by the dim, and Milton by the glowing, violet.

[1] [See, for instance, the criticism of convent-life in *Academy Notes*, 1859 (Vol. XIV. pp. 213–214); the general argument in his exhortations to women in *Sesame and Lilies* (Vol. XVIII.); and, on the dignity of wives and mothers, *Fors Clavigera*, Letter 12, § 14.]

[2] [This intention, however, was not carried out.]

# CHAPTER II

## PINGUICULA

(Written in early June, 1881)

1. On the rocks of my little stream, where it runs, or leaps, through the moorland, the common Pinguicula[1] is now in its perfectest beauty; and it is one of the offshoots of the violet tribe which I have to place in the minor collateral groups of Viola very soon, and must not put off looking at it till next year.

There are three varieties given in Sowerby: 1. Vulgaris, 2. Greater-flowered, and 3. Lusitanica, white, for the most part, pink, or "carnea," sometimes: but the proper colour of the family is violet, and the perfect form of the plant is the "vulgar" one.[2] The larger-flowered variety is feebler in colour, and ruder in form: the white Spanish one, however, is very lovely, as far as I can judge from Sowerby's (*old* Sowerby's[3]) pretty drawing.

The "frequent" one (I shall usually thus translate

[1] [Or Butterwort, of the botanical order of "Lentibularineæ."]

[2] [Compare above, ch. i. § 32, p. 407.]

[3] ["Old Sowerby" is James Sowerby (1757–1822), naturalist and artist, whose work was published in thirty-six volumes between 1790 and 1814. Its full title is *English Botany; or, Coloured Figures of British Plants, with their Essential Characters, Synonyms, and Places by Growth, to which will be added Occasional Remarks*, by James Sowerby. A *second* edition was published between 1832 and 1846, with additional plates by James de Carle Sowerby (1787–1871), eldest son of James; this was in twelve volumes. The *third* edition (text by Dr. J. Boswell Syme) was published between 1863 and 1872 in eleven volumes (a twelfth being added in 1886). The original drawings (mostly by James Sowerby), more than 2500 in number, were bought in 1859 by the Trustees of the British Museum, and may be seen in the Botanical Department at South Kensington. "Each of the drawings has been mounted on a sheet of paper with the corresponding plates of the first and third editions, so as to facilitate comparison—a comparison which, one regrets to say, is most unfavourable, as regards the colouring, to the plates of the later work": see *Notes on the Drawings for Sowerby's English Botany*, by F. N. A. Garry, 1905. The plate of Pinguicula Lusitanica is No. 145 in vol. iii. (ed. 1). For another reference to "old Sowerby," see *Fors Clavigera*, Letter 51, § 19.]

"vulgaris"), is not by any means so "frequent" as the Queen violet, being a true wild-country, and mostly Alpine, plant; and there is also a real "Pinguicula Alpina," which we have not in England, who might be the Regina,[1] if the group were large enough to be reigned over: but it is better not to affect Royalty among these confused, intermediate, or dependent families.

2. In all the varieties of Pinguicula, each blossom has one stalk only, growing from the *ground;* and you may pull all the leaves away from the base of it, and keep the flower only, with its bunch of short fibrous roots, half an inch long; looking as if bitten at the ends. Two flowers, characteristically,—three and four very often,—spring from the same root, in places where it grows luxuriantly; and luxuriant growth means that clusters of some twenty or thirty stars may be seen on the surface of a square yard of boggy ground, quite to its mind; but its real glory is in harder life, in the crannies of well-wetted rock.

3. What I have called "stars" are irregular clusters of approximately, or tentatively, five aloeine[2] ground leaves, of very pale green,—they may be six or seven, or more, but always run into a rudely pentagonal arrangement, essentially first trine, with two succeeding above. Taken as a whole the *plant* is really a main link between violets and Droseras; but the *flower* has much more violet than Drosera in the make of it,—spurred, and *five-petaled*,* and

* When I have the chance, and the time, to submit the proofs of *Proserpina* to friends who know more of Botany than I, or have kindness enough to ascertain debateable things for me, I mean in future to do so,—using the letter A to signify Amicus, generally; with acknowledgment by name, when it is permitted, of especial help or correction. Note first of this kind: I find here on this word, "five-petaled," as applied to Pinguicula, "Qy. two-lipped? it is monopetalous, and monosepalous, the calyx and corolla being each all in one piece."

Yes; and I am glad to have the observation inserted. But my term, "five-petaled," must stand. For the question with me is always first, not how the petals are connected, but how many they are. Also I have accepted

[1] [For Ruskin's use of this term, see above, pp. 351–352.]
[2] [For this term see the Index, below, p. 556.]

held down by the top of its bending stalk as a violet is; only its upper two petals are not reverted—the calyx, of a dark soppy green, holding them down, with its three front sepals set exactly like a strong trident, its two backward sepals clasping the spur. There are often six sepals, four to the front, but the normal number is five. Tearing away the calyx, I find the flower to have been held by it as a lion might hold his prey by the loins if he missed its throat; the blue petals being really campanulate, and the flower best described as a dark bluebell, seized and crushed almost flat by its own calyx in a rage. Pulling away now also the upper petals, I find that what are in the violet the lateral and well-ordered fringes, are here thrown mainly on the lower (largest) petal near its origin, and opposite the point of the seizure by the calyx, spreading from this centre over the surface of the lower petals, partly like an irregular shower of fine Venetian glass broken, partly like the wild-flung Medusa-like embroidery of the white Lucia.*

4. The calyx is of a dark *soppy* green, I said; like that of sugary preserved citron; the root leaves are of green

the term petal—but never the word lip—as applied to flowers. The generic term "Labiatæ" is cancelled in *Proserpina*, "Vestales" being substituted;[1] and these flowers, when I come to examine them, are to be described, not as divided into two lips, but into hood, apron, and side-pockets. Farther, the depth to which either calyx or corolla is divided, and the firmness with which the petals are attached to the torus, may, indeed, often be an important part of the plant's description, but ought not to be elements in its definition. Three-petaled and three-sepaled, four-petaled and four-sepaled, five-petaled and five-sepaled, etc., etc., are essential—with me, primal—elements of definition; next, whether resolute or stellar in their connection; next, whether round or pointed, etc. Fancy, for instance, the fatality to a rose of pointing its petals, and to a lily, of rounding them! But how deep cut, or how hard holding, is quite a minor question.

Farther, that all plants *are* petaled and sepaled, and never mere cups in saucers, is a great fact, not to be dwelt on in a note.

* Our "Lucia Nivea," "Blanche Lucy"; in present botany, Bog bean! having no connection whatever with any manner of bean, but only a slight resemblance to bean-*leaves* in its own lower ones. Compare Ch. iv. § 11 [p. 458].

[1] [See above, p. 355.]

just as soppy, but pale and yellowish, as if they were half decayed; the edges curled up and, as it were, water-shrivelled, as one's fingers shrivel if kept too long in water. And the whole plant looks as if it had been a violet unjustly banished to a bog, and obliged to live there—not for its own sins, but for some Emperor Pansy's, far away in the garden,—in a partly boggish, partly hoggish manner, drenched and desolate; and with something of demoniac temper got into its calyx, so that it quarrels with, and bites the corolla;—something of gluttonous and greasy habit got into its leaves; a discomfortable sensuality, even in its desolation. Perhaps a penguin-ish life would be truer of it than a piggish, the *nest* of it being indeed on the rock, or morassy rock-investiture, like a sea-bird's on her rock ledge.

5. I have hunted through seven treatises on Botany, namely, *Loudon's Encyclopædia*, Balfour, Grindon, Oliver,[1] Baxter of Oxford, Lindley (*Ladies' Botany*), and Figuier, without being able to find the meaning of "Lentibulariaceæ," to which tribe the Pinguicula is said by them all (except Figuier) to belong. It may perhaps be in Sowerby:* but these above-named treatises are precisely of the kind with which the ordinary scholar must be content: and in all of them he has to learn this long, worse than useless, word, under which he is betrayed into classing together two orders naturally quite distinct, the Butterworts and the Bladderworts.

Whatever the name may mean—it is bad Latin. There is such a word as Lenticularis—there is no Lentibularis; and it must positively trouble us no longer.†

* It is not. (Resolute negative from A., unsparing of time for me; and what a state of things it all signifies!)

† With the following three notes, "A" must become a definitely and gratefully interpreted letter. I am indebted for the first, conclusive in itself, but variously supported and confirmed by the two following, to

[1] [*Lessons in Elementary Botany*, by Daniel Oliver, F.R.S., 1864. For the other books, see pp. 203, 235, 395 (Grindon and Baxter), 272, 396.]

The Butterworts are a perfectly distinct group—whether small or large, always recognizable at a glance. Their proper Latin name will be Pinguicula (plural Pinguiculæ), —their English, Bog-Violet, or, more familiarly, Butterwort; and their French, as at present, *Grassette*.[1]

R. J. Mann, Esq., M.D., long ago a pupil of Dr. Lindley's, and now on the council of Whitelands College, Chelsea:—for the second, to Mr. Thomas Moore, F.L.S., the kind Keeper of the Botanic Garden at Chelsea; for the third, which will be farther on useful to us, to Miss Kemm, the botanical lecturer at Whitelands.

(1) There is no explanation of Lentibulariaceæ in Lindley's *Vegetable Kingdom*. He was not great in that line. The term is, however, taken from *Lenticula*, the lentil, in allusion to the lentil-shaped air-bladders of the typical genus *Utricularia*.

The change of the c into b may possibly have been made only from some euphonic fancy of the contriver of the name, who, I think, was Rich.

But I somewhat incline myself to think that the *tibia*, a pipe or flute, may have had something to do with it. The *tibia* may possibly have been diminished into a little pipe by a stretch of licence, and have become *tibula:* [but *tibulus* is a kind of pine tree in Pliny];[2] when *Len tibula* would be the lens or lentil-shaped pipe or bladder. I give you this only for what it is worth. The *lenticula*, as a derivation, is reliable and has authority.

*Lenticula*, a lentil, a freckly eruption; *lenticularis*, lentil-shaped; so the nat. ord. ought to be (if this be right) *lenticulariaceæ*.

(2) BOTANIC GARDENS, CHELSEA, *Feb.* 14, 1882.

*Lentibularia* is an old generic name of Tournefort's, which has been superseded by *utricularia*, but, oddly enough, has been retained in the name of the order *lentibulareæ;* but it probably comes from *lenticula*, which signifies the little root bladders, somewhat resembling lentils.

(3) *Manual of Scientific Terms*, Stormonth, p. 234.

*Lentibulariaceæ*, neuter, plural.

(*Lenticula*, the shape of a lentil; from *lens*, a lentil.) The Butterwort family, an order of plants so named from the lenticular shape of the air-bladders on the branches of utricularia, one of the genera. (But observe that the *Butterworts* have nothing of the sort, any of them.—R.)

Loudon.—"Floaters."

Lindley.—"Sometimes with whorled vesicles."

In Nuttall's Standard (?) Pronouncing Dictionary, it is given,—

*Lenticulareæ*, a nat. ord. of marsh plants, which thrive in water or marshes.

---

[1] [Compare below, p. 432 n.]

[2] [*Nat. Hist.*, xvi. 10, 17.]

The families to be remembered will be only five, namely,

(1.) Pinguicula Major, the largest of the group. As bog plants, Ireland may rightly claim the noblest of them, which certainly grow there luxuriantly, and not (I believe) with us. Their colour is, however, more broken and less characteristic than that of the following species.

(2.) Pinguicula Violacea: Violet-coloured Butterwort (instead of "vulgaris"), the common English and Swiss kind above noticed.

(3.) Pinguicula Alpina: Alpine Butterwort, white and much smaller than either of the first two families; the spur especially small, according to D. 453.[1] Much rarer, as well as smaller, than the other varieties in Southern Europe. "In Britain, known only upon the moors of Rosehaugh, Ross-shire, where the progress of cultivation seems likely soon to efface it." (Grindon.[2])

(4.) Pinguicula Pallida: Pale Butterwort. From Sowerby's drawing (185, vol. iii.) it would appear to be the most delicate and lovely of all the group. The leaves, "like those of other species, but rather more delicate and pellucid, reticulated with red veins, and much involute in the margin. Tube of the corolla, yellow, streaked with red (the streaks like those of a pansy); the petals, pale violet. It much resembles Villosa (our Minima, No. 5) in many particulars, the stem being hairy, and in the lower part the hairs tipped with a viscid fluid, like a sundew. But the Villosa has a slender sharp spur; and in this the spur is blunt and thick at the end." (Since the hairy stem is not peculiar to Villosa, I take for her, instead, the epithet Minima, which is really definitive.)

The pale one is commonly called "Lusitanica," but I find no direct notice of its Portuguese habitation. Sowerby's plant came from Blandford, Dorsetshire; and Grindon says it is frequent in Ireland, abundant in Arran, and extends

[1] [That is, Plate 453 in *Flora Danica:* see below, p. 441 n., for Ruskin's list of abbreviations.]

[2] [Leo H. Grindon: *British and Garden Botany*, 1864, p. 424.]

on the western side of the British island from Cornwall to Cape Wrath. My epithet, Pallida, is secure, and simple, wherever the plant is found.

(5.) Pinguicula Minima: Least Butterwort; in D. 1021 called Villosa, the *scape* of it being hairy. I have not yet got rid of this absurd word "scape," meaning, in botanist's Latin, the flower-stalk of a flower growing out of a cluster of leaves on the ground. It is a bad corruption of "sceptre," and especially false and absurd, because a true sceptre is necessarily branched.* In *Proserpina*, when it is spoken of distinctively, it is called "virgula" (see vol. i., pp. 315, 316). The hairs on the virgula are in this instance so minute that even with a lens I cannot see them in the Danish plate: of which Fig. 26 is a rough translation into woodcut, to show the grace and mien of the little thing. The trine leaf cluster is characteristic, and the folding up of the leaf edges. The flower, in the Danish plate, full purple. Abundant in east of *Finmark* (Finland?),[1] but *always growing in marsh moss* (Sphagnum palustre).

Fig. 26

6. I call it "Minima" only, as the least of the five here named; without putting forward any claim for it to be the smallest pinguicula that ever was or will be. In such sense only, the epithets minima or maxima are to be understood when used in *Proserpina:* and so also, every statement and every principle is only to be understood as true or tenable, respecting the plants which the writer has seen, and which he is sure that the reader can easily see: liable to modification to any extent by wider experience; but better first

* More accurately, shows the pruned roots of branches,—ἐπειδὴ πρῶτα τομὴν ἐν δρεσσι λέλοιπεν.[2] The *pruning* is the mythic expression of the subduing of passion by rectorial law.

[1] [Finmark is one of the counties of Norway.]
[2] [*Iliad*, i. 235: see above, p. 308.]

learned securely within a narrow fence, and afterwards trained or fructified, along more complex trellises.

7. And indeed my readers—at least, my newly found readers—must note always that the only power which I claim for any of my books, is that of being right and true as far as they reach. None of them pretend to be Kosmoses;—none to be systems[1] of Positivism or Negativism, on which the earth is in future to swing instead of on its old worn-out poles;—none of them to be works of genius;—none of them to be, more than all true work *must* be, pious;—and none to be, beyond the power of common people's eyes,* ears, and noses, "æsthetic." They tell you that the world is *so* big, and can't be made bigger—that you yourself are also so big, and can't be made bigger, however you puff or bloat yourself; but that, on modern mental nourishment, you may very easily be made smaller. They tell you that two and two are four, that ginger is hot in the mouth, that roses are red, and smuts black. Not themselves assuming to be pious, they yet assure you that there is such a thing as piety in the world, and that it is wiser than impiety; and not themselves pretending to be works of genius, they yet assure you that there is such a thing as genius in the world, and that it is meant for the light and delight of the world.

8. Into these repetitions of remarks on my work, often made before, I have been led by an unlucky author who has just sent me his book, advising me that it is "neither critical nor sentimental" (he had better have said in plain English "without either judgment or feeling"), and in which nearly the first sentence I read is—"Solomon with all his acuteness was not wise enough to . . . etc., etc., etc." ("give the Jews the British constitution," I believe

* The bitter sorrow with which I first recognized the extreme rarity of finely-developed organic sight is expressed enough in the lecture on the Mystery of Life, added in the large edition of *Sesame and Lilies*.[2]

[1] [Compare Vol. XXII. p. 505 and Vol. XXIV. p. 371.]
[2] [See Vol. XVIII. p. 145.]

the man means). He is not a whit more conceited than Mr. Herbert Spencer, or Mr. Goldwin Smith, or Professor Tyndall,—or any lively London apprentice out on a Sunday; but this general superciliousness with respect to Solomon, his Proverbs, and his politics, characteristic of the modern Cockney, Yankee, and Anglicised Scot, is a difficult thing to deal with for us of the old school, who were well whipped when we were young; and have been in the habit of occasionally ascertaining our own levels as we grew older, and of recognizing that, here and there, somebody stood higher, and struck harder.

9. A difficult thing to deal with, I feel more and more, hourly, even to the point of almost ceasing to write; not only every feeling I have, but, of late, even *every word I use*, being alike inconceivable to the insolence, and unintelligible amidst the slang, of the modern London writers. Only in the last magazine I took up, I found an article by Mr. Goldwin Smith on the Jews[1] (of which the gist—as far as it had any—was that we had better give up reading the Bible), and in the text of which I found the word "tribal" repeated about ten times in every page. Now, if "tribe" makes "tribal," tube must make tubal, cube, cubal, and gibe, gibal; and I suppose we shall next hear of tubal music, cubal minerals, and gibal conversation! And observe how all this bad English leads instantly to blunder in thought, prolonged indefinitely. The Jewish Tribes are not separate races, but the descendants of brothers. The Roman Tribes, political divisions; essentially Trine: and the whole force of the word Tribune vanishes, as soon as the ear is wrung into acceptance of his lazy innovation by the modern writer.[2] Similarly, in the last elements of mineralogy I took up, the first order of crystals was called "tesseral"; the writer being much too fine to

[1] ["The Jews. A Deferred Referender." By Goldwin Smith, in *The Nineteenth Century*, November 1882, vol. 12, pp. 687 *seq.*]

[2] [The adjective in earlier English was "tribual": see, for instance, Fuller's *English Worthies*, ii. 225.]

call them "four-al," and too much bent on distinguishing himself from all previous writers to call them cubic.

10. What simple school-children, and sensible schoolmasters, are to do in this atmosphere of Egyptian marsh, which rains fools upon them like frogs, I can no more with any hope or patience conceive;—but this finally I repeat, concerning my own books, that they are written in honest English, of good Johnsonian lineage,[1] touched here and there with colour of a little finer or Elizabethan quality: and that the things they tell you are comprehensible by any moderately industrious and intelligent person; and *accurate*, to a degree which the accepted methods of modern science cannot, in my own particular fields, approach.

11. Of which accuracy, the reader may observe for immediate instance, my extrication for him, from among the utricularias, of these five species of the Butterwort; which, being all that need be distinctly named and remembered, *do* need to be first carefully distinguished, and then remembered in their companionship. So alike are they, that Gerarde[2] makes no distinction among them; but masses them under the general type of the frequent English one, described as the second kind of his promiscuous group of "Sanicle," "which Clusius[3] calleth Pinguicula; not before his time remembered, hath sundry small thick leaves, fat and full of juice, being broad towards the root and sharp towards the point, of a faint green colour, and bitter in taste; out of the middest whereof sprouteth or shooteth up a naked slender stalke nine inches long, every stalke bearing one flower and no more, sometimes white, and sometimes of a bluish purple colour, fashioned like unto the common Monkshoods" (he means Larkspurs) "called Consolida Regalis, having the like spur or Lark's heel attached thereto." Then after describing a third kind of

[1] [For the influence of Johnson upon Ruskin's thought and style, see *Præterita*, i. § 251.]

[2] [*The Herball*, 1597, vol. i. pp. 643–645.]

[3] [The Latinised name of Charles de l'Escluse, botanical writer: died at Leyden, 1609.]

Sanicle (Cortusa Mathioli, a large-leaved Alpine Primula), he goes on: "These plants are strangers in England; their natural country is the alpish mountains of Helvetia. They grow in my garden, where they flourish exceedingly, except Butterwoort, which groweth in our English *squally* wet grounds,"—("Squally," I believe, here, from squalidus, though Johnson does not give this sense; but one of his quotations from Ben Jonson touches it nearly: "Take heed that their new flowers and sweetness do not as much corrupt as the others' dryness and squalor,"—and note farther that the word "squall," in the sense of gust, is not pure English, but the Arabic "Chuaul" with an s prefixed:—the English word, a form of "squeal," meaning a child's cry, from Gothic "Squæla" and Icelandic "squilla," would scarcely have been made an adjective by Gerarde),[1] —"and will not yield to any culturing or transplanting: it groweth especially in a field called Cragge Close, and at Crosbie Ravenswaithe, in Westmerland (West-*mere*-land you observe, not *mor*[2]); upon Ingleborough Fells, twelve miles from Lancaster, and by Harwoode in the same county near to Blackburn: ten miles from Preston, in Anderness, upon the bogs and marish ground, and in the boggie meadows about Bishop's-Hatfield, and also in the fens in the way to Wittles Meare" (Roger Wildrake's Squattlesea Mere?[3]) "from Fendon, in Huntingdonshire." Where doubtless Cromwell ploughed it up, in his young days, pitilessly; and in nowise pausing, as Burns beside his fallen daisy.[4]

12. Finally, however, I believe we may accept its English name of "Butterwort" as true Yorkshire, the more enigmatic form of "Pigwilly" preserving the tradition of the flowers once abounding, with softened Latin name, in Pigwilly bottom, close to Force bridge, by Kendal.

[1] [According to Skeat, *squall* is a Scandinavian word, signifying originally the gushing out of water.]

[2] [Compare *Deucalion*, i. ch. vii. § 3 (Vol. XXVI.).]

[3] [Captain Roger Wildrake, of Squattlesea Mere, one of the characters in Scott's *Woodstock*. For Whittlesea Mere, see above, p. 87 *n*.]

[4] [See his poem "To a Mountain Daisy, on turning one down with the plough, in April, 1786."]

Gerarde[1] draws the English variety as "Pinguicula sive Sanicula Eboracensis,—Butterwoort, or Yorkshire Sanicle"; and he adds: "The husbandmen's wives of Yorkshire do use to anoint the dugs of their kine with the fat and oilous juice of the herb Butterwort when they be bitten of any venomous worm, or chapped, rifted and hurt by any other means."

13. In Lapland it is put to much more certain use:—

"It is called Tätgrass, and the leaves are used by the inhabitants to make their 'tät miolk,' a preparation of milk in common use among them. Some fresh leaves are laid upon a filter, and milk, yet warm from the reindeer, is poured over them. After passing quickly through the filter, this is allowed to rest for one or two days until it becomes ascescent,* when it is found not to have separated from the whey, and yet to have attained much greater tenacity and consistence than it would have done otherwise. The Laplanders and Swedes are said to be extremely fond of this milk, which when once made, it is not necessary to renew the use of the leaves, for we are told that a spoonful of it will turn another quantity of warm milk, and make it like the first." † (Baxter, vol. iii., No. 209.)

14. In the same page, I find quoted Dr. Johnston's observation that "when specimens of this plant were somewhat rudely pulled up, the flower-stalk, previously erect, almost immediately began to bend itself backwards, and

* Lat. acesco, to turn sour.

† Withering quotes this[2] as from Linnæus, and adds on authority of a Mr. Hawkes, "This did not succeed when tried with cows' milk." He also gives as another name, Yorkshire Sanicle; and says it is called *earning grass* in Scotland. Linnæus says the juice will curdle reindeer's milk. The name for rennet is *earning*, in Lincolnshire. Withering also gives this note: "*Pinguis*, fat, from its effect in CONGEALING milk."—(A.) Withering of course wrong: the name comes, be the reader finally assured, from the fatness of the green leaf, quite peculiar among wild plants, and fastened down for us in the French word "grassette."[3] I have found the flowers also difficult to dry, in the benighted early times when I used to think a dried plant useful! See closing paragraphs of the 4th chapter—R.[4]

[1] [*The Herball*, 1597, vol. i. pp. 644, 646.]

[2] ["Quotes this," *i.e.*, information to like effect. See *An Arrangement of British Plants; according to the Latest Improvements of the Linnæan System*, by William Withering, M.D., F.R.S. (1st ed., 1787), 3rd ed., 1796, vol. ii. p. 19 *n*. Baxter (*Phænogamous Botany*) refers to Dr. Johnston as "the author of a very excellent *Flora of Berwick upon Tweed*."

[3] [Compare above, p. 425.]

[4] [Below, pp. 463–465, where Ruskin deals with botanical illustrations made, as they should be, from living specimens.]

formed a more or less perfect segment of a circle; and so also, if a specimen is placed in the Botanic box, you will in a short time find that the leaves have curled themselves backwards, and now conceal the root by their revolution."

I have no doubt that this elastic and wiry action is partly connected with the plant's more or less predatory or fly-trap character, in which these curiously degraded plants are associated with Drosera. I separate them therefore entirely from the Bladderworts, and hold them to be a link between the Violets and the Droseraceæ, placing them, however, with the Cytherides, as a sub-family, for their beautiful colour, and because they are indeed a grace and delight in ground which, but for them, would be painfully and rudely desolate.

# CHAPTER III

## VERONICA

1. "THE Corolla of the Foxglove," says Dr. Lindley, beginning his account of the tribe at page 195 of the first volume of his *Ladies' Botany*, "is a large inflated body (!), with its throat spotted with rich purple, and its border divided obliquely into five very short lobes, of which the two upper are the smaller; its four stamens are of unequal length, and its style is divided into two lobes at the upper end. A number of long hairs cover the ovary, which contains two cells and a great quantity of ovules.

"This" (*sc.* information) "will show you what is the usual character of the Foxglove tribe; and you will find that all the other genera referred to it in books agree with it essentially, although they differ in subordinate points. It is chiefly (A) in the form of the corolla, (B) in the number of the stamens, (C) in the consistence of the rind of the fruit, (D) in its form, (E) in the number of the seeds it contains, and (F) in the manner in which the sepals are combined, that these differences consist."

2. The enumerative letters are of my insertion—otherwise the above sentence is, word for word, Dr. Lindley's, —and it seems to me an interesting and memorable one in the history of modern Botanical science. For it appears from the tenor of it, that in a scientific botanist's mind, six particulars, at least, in the character of a plant, are merely "subordinate points,"—namely,

1. (F) The combination of its calyx,
2. (A) The shape of its corolla,
3. (B) The number of its stamens,
4. (D) The form of its fruit,

5. (C) The consistence of its shell,—and

6. (E) The number of seeds in it.

Abstracting, then, from the primary description, all the six inessential points, I find the three essential ones left are, that the style is divided into two lobes at the upper end, that a number of glandular hairs cover the ovary, and that this latter contains two cells.

8. None of which particulars concern any reasonable mortal, looking at a Foxglove, in the smallest degree. Whether hairs which he can't see are glandular or bristly, —whether the green knobs, which are left when the purple bells are gone, are divided into two lobes or two hundred,— and whether the style is split, like a snake's tongue, into two lobes, or like a rogue's, into any number—are merely matters of vulgar curiosity, which he needs a microscope to discover, and will lose a day of his life in discovering. But if any pretty young Proserpina, escaped from the Plutonic durance of London, and carried by the tubular process, which replaces Charon's boat, over the Lune at Lancaster, cares to come and walk on the Coniston hills in a summer morning, when the eyebright is out on the high fields, she may gather, with a little help from Brantwood garden, a bouquet of the entire Foxglove tribe in flower, as it is at present defined, and may see what they are like, altogether.[1]

4. She shall gather: first, the Euphrasy, which makes the turf on the brow of the hill glitter as if with new-fallen manna; then, from one of the blue clusters on the top of the garden wall, the common bright blue Speedwell; and, from the garden bed beneath, a dark blue spire of Veronica spicata; then, at the nearest opening into the wood, a little foxglove in its first delight of shaking out its bells; then— what next does the Doctor say?—a snapdragon? we must go back into the garden for that—here is a goodly crimson one, but what the little speedwell will think of him for a relative *I* can't think!—a mullein?—that we must do without for the moment; a monkey flower?—that we will

[1] [Here Ruskin collects various plants belonging to the botanical order of "Scrophularineæ."]

do without, altogether; a lady's slipper?—say rather a goblin's with the gout! but, such as the flower-cobbler has made it, here is one of the kind that people praise, out of the greenhouse,—and yet a figwort we must have, too; which I see, on referring to Loudon,[1] may be balm-leaved, hemp-leaved, tansy-leaved, nettle-leaved, wing-leaved, heart-leaved, ear-leaved, spear-leaved, or lyre-leaved. I think I can find a balm-leaved one, though I don't know what to make of it when I've got it, but it's called a "Scorodonia" in Sowerby, and something very ugly besides;[2]—I'll put a bit of Teucrium Scorodonia in, to finish: and now—how will my young Proserpina arrange her bouquet, and rank the family relations to their contentment?

5. She has only one kind of flowers in her hand, as botanical classification stands at present; and whether the system be more rational, or in any human sense more scientific, which puts calceolaria and speedwell together,—and foxglove and euphrasy; and runs them on one side into the mints, and on the other into the nightshades;—naming them, meanwhile, some from diseases, some from vermin, some from blockheads, and the rest anyhow:—or the method I am pleading for, which teaches us, watchful of their seasonable return and chosen abiding places, to associate in our memory the flowers which truly resemble, or fondly companion, or, in time kept by the signs of Heaven, succeed, each other; and to name them in some historical connection with the loveliest fancies and most helpful faiths of the ancestral world—Proserpina be judge; with every maid that sets flowers on brow or breast—from Thule to Sicily.

6. We will unbind our bouquet, then, and putting all the rest of its flowers aside, examine the range and nature of the little blue cluster only.

And first—we have to note of it, that the plan of the blossom in all the kinds is the same; an irregular quatrefoil:

[1] [*Encyclopædia of Plants*, vol. i. p. 530.]
[2] [*Scrofularia Scorodonia* (balm-leaved Figwort), vol. vi. Plate 950, ed. 3.]

and irregular quatrefoils are of extreme rarity in flower form. I don't myself know *one*, except the Veronica. The cruciform vegetables—the heaths, the olives, the lilacs, the little Tormentillas, and the poppies, are all perfectly symmetrical. Two of the petals, indeed, as a rule, are different from the other two, except in the heaths; and thus a distinctly crosslet form obtained, but always an equally balanced one: while in the Veronica, as in the Violet, the blossom always refers itself to a supposed place on the stalk with respect to the ground; and the upper petal is always the largest.

The supposed place is often very supposititious indeed —for clusters of the common veronicas, if luxuriant, throw their blossoms about anywhere. But the idea of an upper and lower petal is always kept in the flower's little mind.

7. In the second place, it is a quite open and flat quatrefoil—so separating itself from the belled quadrature of the heath, and the tubed and primrose-like quadrature of the cruciferæ; and, both as a quatrefoil, and as an open one, it is separated from the foxgloves and snapdragons, which are neither quatrefoils, nor open; but are cinqfoils shut up!

8. In the third place, open and flat though the flower be, it is monopetalous; all the four arms of the cross strictly becoming one in the centre; so that, though the blue foils *look* no less sharply separate than those of a buttercup or a cistus; and are so delicate that one expects them to fall from their stalk if we breathe too near,—do but lay hold of one,—and, at the touch, the entire blossom is lifted from its stalk, and may be laid, in perfect shape, on our paper before us, as easily as if it had been a nicely made-up blue bonnet, lifted off its stand by the milliner.

I pause here, to consider a little; because I find myself mixing up two characteristics which have nothing necessary in their relation;—namely, the unity of the blossom, and its coming easily off the stalk. The separate petals of the cistus and cherry fall as easily as the foxglove drops its

bells;—on the other hand, there are monopetalous things that don't drop, but hold on like the convoluta,* and make the rest of the tree sad for their dying. I do not see my way to any systematic noting of decadent or persistent corolla; but, in passing, we may thank the veronica for never allowing us to see how it fades,† and being always cheerful and lovely, while it is with us.

9. And for a farther specialty, I think we should take note of the purity and simplicity of its *floral* blue, not sprinkling itself with unwholesome sugar like a larkspur, nor varying into coppery or turquoise-like hue as the forget-me-not; but keeping itself as modest as a blue print, pale, in the most frequent kinds; but pure exceedingly; and rejoicing in fellowship with the grey of its native rocks. The palest of all I think it will be well to remember as Veronica Clara, the "Poor Clare" of Veronicas. I find this note on it in my diary,—

"The flower of an exquisite grey-white, like lichen, or shaded hoar-frost, or dead silver; making the long-weathered stones it grew upon perfect with a finished modesty of paleness, as if the flower *could* be blue, and would not, for their sake. Laying its fine small leaves along in embroidery, like Anagallis tenella,[1]—indescribable in the tender feebleness of it—afterwards as it grew, dropping the little blossoms from the base of the spire, before the buds at the top had blown. Gathered, it was happy beside me, with a little water under a stone, and put out one pale blossom after another, day by day."

* I find much more difficulty, myself, being old, in using my altered names for species than my young scholars will. In watching the bells of the purple bindweed fade at evening, let them learn the fourth verse of the prayer of Hezekiah, as it is in the Vulgate—"Generatio mea ablata est, et convoluta est a me, sicut tabernaculum pastoris,"[2]—and they will not forget the name of the fast-fading—ever renewed—"belle d'un jour."

† "It is Miss Cobbe, I think, who says, 'all wild flowers know how to die gracefully.'"—A.

[1] [See below, p. 543.]

[2] [Isaiah xxxviii. 12. For "convoluta," Ruskin's name for the bindweed, see i. ch. viii. § 21 (p. 313).]

10. Lastly, and for a high worthiness, in my estimate, note that it is *wild*, of the wildest, and proud in pure descent of race; submitting itself to no follies of the cur-breeding florist. Its species, though many resembling each other, are severally constant in aspect, and easily recognizable; and I have never seen it provoked to glare into any gigantic impudence at a flower show. Fortunately, perhaps, it is scentless, and so despised.

11. Before I attempt arranging its families, we must note that while the corolla itself is one of the most constant in form, and so distinct from all other blossoms that it may be always known at a glance; the leaves and habit of growth vary so greatly in families of different climates, and those born for special situations, moist or dry, and the like, that it is quite impossible to characterise Veronic, or Veronique, vegetation in general terms. One can say, comfortably, of a strawberry, that it is a creeper, without expecting at the next moment to see a steeple of strawberry blossoms rise to contradict us;—we can venture to say of a foxglove that it grows in a spire, without any danger of finding, farther on, a carpet of prostrate and entangling digitalis; and we may pronounce of a buttercup that it grows mostly in meadows, without fear of finding ourselves, at the edge of the next thicket, under the shadow of a buttercup-bush growing into valuable timber. But the Veronica reclines with the lowly,* upon occasion, and aspires, with the proud; is here the pleased companion of the ground-ivies, and there the unrebuked rival of the larkspurs: on the rocks of Coniston it effaces itself almost into the film of a lichen; it pierces the snows of Iceland with the gentian: and in the Falkland Islands is a white-blossomed evergreen, of which botanists are in dispute whether it be Veronica or Olive.[1]

* See distinction between recumbent and rampant herbs, below, under "Veronica Agrestis," p. 442.

[1] [See below, p. 448.]

12. Of these many and various forms, I find the manners and customs alike inconstant; and this of especially singular in them—that the Alpine and northern species bloom hardily in contest with the retiring snows, while with us they wait till the spring is past, and offer themselves to us only in consolation for the vanished violet and primrose. As we farther examine the ways of plants, I suppose we shall find some that determine upon a fixed season, and will bloom methodically in June or July, whether in Abyssinia or Greenland; and others, like the violet and crocus, which are flowers of the spring, at whatever time of the favouring or frowning year the spring returns to their country. I suppose also that botanists and gardeners know all these matters thoroughly: but they don't put them into their books, and the clear notions of them only come to me now, as I think and watch.

13. Broadly, however, the families of the Veronica fall into three main divisions,—those which have round leaves lobed at the edge, like ground ivy; those which have small thyme-like leaves; and those which have long leaves like a foxglove's, only smaller—never more than two or two and a half inches long. I therefore take them in these connections, though without any bar between the groups; only separating the Regina from the other thyme-leaved ones, to give her due precedence; and the rest will then arrange themselves into twenty families, easily distinguishable and memorable.

I have chosen for Veronica Regina, the brave Icelandic one, which pierces the snow in first spring, with lovely small shoots of perfectly set leaves, no larger than a grain of wheat; the flowers in a lifted cluster of five or six together, not crowded, yet not loose; large, for veronica—about the size of a silver penny, or say half an inch across—deep blue, with ruby centre.

My woodcut, Fig. 27, is outlined* from the beautiful

* "Abstracted" rather, I should have said, and with perfect skill, by Mr. Collingwood (the joint translator of Xenophon's *Economist* for the *Bibliotheca Pastorum*). So also the next following cut, Fig. 28.

engraving D. 842,*—there called "fruticulosa," from the number of the young shoots.

14. Beneath the Regina, come the twenty easily distinguished families, namely:—

(1.) Chamædrys. "Ground-oak." I cannot tell why so called—its small and rounded leaves having nothing like oak leaves about them, except the serration, which is common to half, at least, of all leaves that grow. But the idea is all over Europe, apparently. Fr. "petit chêne": German and English "Germander," a merely corrupt form of Chamædrys.

The representative English veronica "Germander Speedwell"—very prettily drawn in S. 986; too tall and weedlike in D. 448.[1]

Fig. 27

(2.) Hederifolia. Ivy-leaved: but more properly, cymbalaria-leaved. It is the English

* Of the references, henceforward necessary to the books I have used as authorities, the reader will please note the following abbreviations:—

C. Curtis's *Magazine of Botany.*
D. *Flora Danica.*
F. Figuier.
G. Sibthorp's *Flora Græca.*
L. Linnæus. *Systema Naturæ.*
L. S. Linnæus's *Flora Suecica.* But till we are quite used to the other letters, I print this reference in words.
L. N. William Curtis's *Flora Londinensis.* Of the exquisite plates engraved for this book by James Sowerby, note is taken in the close of next chapter [p. 464].
O. Sowerby's *English Wild Flowers;* the old edition in thirty-two thin volumes—far the best.
S. Sowerby's *English Wild Flowers;* the modern edition in ten volumes.[2]

[1] [But see the correction in ch. vi. § 1 *n.* (p. 473).]

[2] [For particulars of "C," see p. 197 *n.*; "D," Vol. XIII. p. 530 *n.*; "F," p. 207 *n.*; "G," p. 406 *n.*; and for "O" and "S," p. 421 *n.* (*English Botany* is the true title, not *English Wild Flowers*).]

field representative, though blue-flowered, of the Byzantine white veronica, V. Cymbalaria, very beautifully drawn in G. 9. Hederifolia, well in D. 428.

(3.) Agrestis. Fr. "Rustique." We ought however clearly to understand whether "agrestis," used by English botanists, is meant to imply a literally field flower, or only a "rustic" one, which might as properly grow in a wood. I shall always myself use "agrestis" in the literal sense, and "rustica" for "rustique." I see no reason, in the present case, for separating the Polite from the Rustic flower: the agrestis, D. 449 and S. 972, seems to me not more meekly recumbent, nor more frankly cultureless, than the so-called Polita, S. 971: there seems also no French acknowledgment of its politeness, and the Greek family, G. 8, seem the rudest and wildest of all.[1]

Quite a *field* flower it is, I believe, lying always low on the ground, recumbent, but not creeping. Note this difference: no fastening roots are thrown out by the reposing stems of this Veronica; a creeping or accurately "rampant" plant roots itself in advancing. Conf. Nos. 5, 6.

(4.) Arvensis. We have yet to note a still finer distinction in epithet. "Agrestis" will properly mean a flower of the open ground—yet not caring whether the piece of earth be cultivated or not, so long as it is under clear sky. But when *agri*-culture has turned the unfruitful acres into "arva beata,"[2]—if then the plant thrust itself between the furrows of the plough, it is properly called "Arvensis."

I don't quite see my way to the same distinction in English,—perhaps I may get into the habit, as time goes on, of calling the Arvenses consistently furrow-flowers, and the Agrestes field-flowers. Furrow-veronica is a tiresomely long name, but must do for the present, as the best interpretation of its Latin character, "vulgatissima in cultis et arvis," D. 515. The blossom itself is exquisitely delicate;

[1] [See, again, ch. vi. § 4 (p. 474).]
[2] [Horace: *Epodes*, xvi. 41; compare *Fors Clavigera*, Letter 43, § 10.]

and we may be thankful, both here and in Denmark, for such a lovely "vulgate."

(5.) Montana. D. 1201. The first really creeping plant we have had to notice. It throws out roots from the recumbent stems. Otherwise like agrestis, it has leaves like ground-ivy. Called a wood species in the text of D.

(6.) Persica. An eastern form, but now perfectly naturalised here—D. 1982; S. 978. The flowers very large, and extremely beautiful, but only one springing from each leaf-axil.

Leaves and stem like Montana; and also creeping with new roots at intervals.

(7.) Triphylla (not triphyll*os*,—see *Flora Suecica*, 22). Meaning trifid-leaved; but the leaf is really divided into five lobes, not three—see S. 974, and G. 10. The palmate form of the leaf seems a mere caprice, and indicates no transitional form in the plant: it may be accepted as only a momentary compliment of mimicry to the geraniums. The Siberian variety, "multifida," C. 1679, divides itself almost as the submerged leaves of the water-ranunculus.

The triphylla itself is widely diffused, growing alike on the sandy fields of Kent, and of Troy. In D. 627 is given an extremely delicate and minute northern type, the flowers springing as in Persica, one from each leaf-axil, and at distant intervals.

(8.) Officinalis. D. 248, S. 984. Fr. "Veronique officinale" (Germ. Gebrauchlicher Ehrenpreis); our commonest English and Welsh speedwell;[1] richest in cluster and frankest in roadside growth, whether on bank or rock; but assuredly liking *either* a bank *or* a rock, and the top of a wall better than the shelter of one. Uncountable "myriads," I am tempted to write, but, cautiously and literally, "hundreds" of blossoms—if one *could* count,—ranging certainly towards the thousand in some groups, all bright at once, make our Westmoreland lanes look as if they were decked

[1] [Ruskin corrected this statement in the following Part of *Proserpina*: see ch. vi. § 1 (p. 473).]

for weddings, in early summer. In the Danish Flora it is drawn small and poor; its southern type being the true one: but it is difficult to explain the difference between the look of a flower which really *suffers*, as in this instance, by a colder climate, and becomes mean and weak, as well as dwarfed; and one which is braced and brightened by the cold, though diminished, as if under the charge and charm of an affectionate fairy, and becomes a joyfully patriotic inheritor of wilder scenes and skies. Medicinal, to soul and body alike, this gracious and domestic flower; though astringent and bitter in the juice. It is the Welsh deeply honoured "Fluellen."[1]—See final note on the myth of Veronica, § 19.

(9.) Thymifolia. Thyme-leaved, G. 6. Of course the longest possible word—serpyllifolia—is used in S. 978. It is a high mountain plant, growing on the top of Crete as the snow retires; and the Veronica minor of Gerarde; "the roote is small and threddie, taking hold of the *upper surface* of the earth, where it spreadeth." So also it is drawn as a creeper in F. 492, where the flower appears to be oppressed and concealed by the leafage.

(10.) Minuta, called "hirsuta" in S. 985: an ugly characteristic to name the lovely little thing by. The distinct blue lines in the petals might perhaps justify "picta" or "lineata," rather than an epithet of size; but I suppose it is Gerarde's Minima, and so leave it, more safely named as "minute" than "least." For I think the next variety may dispute the leastness.

(11.) Verna. D. 252. Mountains, in dry places in early spring. Upright, and confused in the leafage, which is sharp-pointed and close set, much hiding the blossom, but of extreme elegance, fit for a sacred foreground; as any gentle student will feel, who copies this outline from the *Flora Danica*, Fig. 28.

(12.) Peregrina. D. 407. Another extremely small

[1] [A corruption of the Welsh name "Llewelyn" (Llewelyn's flower). Gerarde (*Herball*, ii. p. 629) says of the Veronica, "In welch it is called Fluellen."]

variety, nearly pink in colour, passing into bluish lilac and white. American; but called, I do not see why, "Veronique *voyageuse*," by the French, and "Fremder Ehrenpreis" in Germany. Given as a frequent English weed in S. 927.

(13.) Alpina. Veronique des Alpes. Gebirgs Ehrenprei s. Still minute; its scarcely distinct flowers forming a close head among the leaves; round petalled in D. 16, but sharp, as usual, in S. 980. On the Norway Alps in grassy places; and in Scotland by the side of mountain rills; but rare. On Ben Nevis and Lachin y Gair (S.).

*Fig.* 28

(14.) Scutellata. From the shield-like shape of its seed-vessels. Veronique à Ecusson; Schildfruchtiger Ehrenpreis. But the seed-vessels are more heart shape than shield. Marsh Speedwell. S. 988, D. 209,—in the one pink, in the other blue; but again in D. 1561, pink.

"In flooded meadows, common." (D.) A spoiled and scattered form; the seeds too conspicuous, but the flowers very delicate, hence "Gratiola minima" in Gesner.[1] The confused ramification of the clusters worth noting, in relation to the equally straggling fibres of root.

(15.) Spicata. S. 982: very prettily done, representing the inside of the flower as deep blue, the outside pale. The top of the spire, all calices, the calyx being indeed, through all the veronicas, an important and persistent member.

The tendency to arrange itself in spikes is to be noted as a degradation of the veronic character; connecting it

[1] [See *Conradi Gesneri Philosophi et medici celeberrimi opera Botanica per duo sæcula desiderata . . . nunc primum in lucem edidit D.C.C. Schmiedel*, Nuremburg 1751, part ii. p. 64 and Plate xxxi.]

on one side with the snapdragons, on the other with the ophryds. In Veronica Ophrydea (C. 2210) this resemblance to the contorted tribe is carried so far that "the corolla of the veronica becomes irregular, the tube gibbous, the faux (throat) hairy, and three of the laciniæ (lobes of petals) variously twisted." The spire of blossom, violet-coloured, is then close set, and exactly resembles an ophryd, except in being sharper at the top. The engraved outline of the blossom is good, and very curious.

(16.) Gentianoides.[1] This is the most directly and curiously imitative among the—shall we call them—"histrionic" types of Veronica. It grows exactly like a clustered upright gentian; has the same kind of leaves at its root, and springs with the same bright vitality among the retiring snows of the Bithynian Olympus. (G. 5.) If, however, the Caucasian flower, C. 1002, be the same, it has lost its perfect grace in luxuriance, growing as large as an asphodel, and with root-leaves half a foot long.

The petals are much veined; and this, of all veronicas, has the lower petal smallest in proportion to the three above,—"triplò aut quadruplò minori." (G.)

(17.) Stagnarum. Marsh-Veronica. The last four families we have been examining vary from the typical Veronicas not only in their lance-shaped clusters, but in their lengthened, and often every way much enlarged leaves also: and the two which we now will take in association, 17 and 18, carry the change in aspect farthest of any, being both of them true water-plants, with strong stems and thick leaves. The present name of my Veronica Stagnarum is however V. anagallis, a mere insult to the little water primula, which one plant of the Veronica would make fifty of. This is a rank water-weed, having confused bunches of blossom and seed, like unripe currants, dangling from the leaf-axils. So that where the little triphylla (No. 7, above) has only one blossom, daintily set, and well seen, this has a litter of twenty-five or thirty on a long stalk, of which

[1] [But see ch. vi. § 3 (p. 474).]

only three or four are well out as flowers, and the rest are mere knobs of bud or seed. The stalk is thick (half an inch round at the bottom), the leaves long and misshapen. "Frequens in fossis," D. 908. French, Mouron d'Eau, but I don't know the root or exact meaning of Mouron.[1]

An ugly Australian species, "labiata," C. 1660, has leaves two inches long, of the shape of an aloe's, and partly aloeine in texture, "sawed with unequal, fleshy, pointed teeth."

(18.) Fontium. Brook-Veronica. Brook-*Lime*, the Anglo-Saxon "lime" from Latin limus, meaning the soft mud of streams. German "Bach-bunge" (Brook-purse?) ridiculously changed by the botanists into "Beccabunga," for a Latin name! Very beautiful in its crowded green leaves as a stream-companion; rich and bright more than watercress. See notice of it at Matlock, in *Modern Painters*, vol. v.[2]

(19.) Clara. Veronique des rochers. Saxatilis, I suppose, in Sowerby, but am not sure of having identified that with my own favourite, for which I therefore keep the name "Clara" (see above, § 9); and the other rock variety, if indeed another, must be remembered, together with it.

(20.) Glauca. G. 7. And this, at all events, with the Clara, is to be remembered as closing the series of twenty families, acknowledged by Proserpina. It is a beautiful low-growing ivy-leaved type, with flowers of subdued lilac-blue. On Mount Hymettus: no other locality given in the *Flora Græca*.[3]

15. I am sorry, and shall always be so, when the varieties of any flower which I have to commend to the student's memory, exceed ten or twelve in number; but I am content to gratify his pride with lengthier task, if indeed he will resign himself to the imperative close of the more inclusive catalogue, and be content to know the twelve, or sixteen, or twenty, acknowledged families,

[1] ["Origin uncertain," says Littré of the word.]
[2] [Vol. VII. p. 270.]
[3] [For a twenty-first variety—namely, "Polita," classed above (p. 442) as only a variety of "Agrestis"—see below, ch. vi. § 4 (p. 474).]

thoroughly; and only in their illustration to think of rarer forms. The object of *Proserpina* is to make him happily cognizant of the common aspect of Greek and English flowers; under the term "English," comprehending the Saxon, Celtic, Norman, and Danish Floras. Of the evergreen shrub alluded to in § 11 above, the Veronica Decussata of the Pacific, which is "a bushy evergreen, with beautifully set cross-leaves, and white blossoms scented like olea fragrans," I should like him only to read with much surprise, and some incredulity, in Pinkerton's[1] or other entertaining travellers' voyages.

16. And of the families given, he is to note for the common simple characteristic, that they are quatrefoils referred to a more or less elevated position on a central stem, and having, in that relation, the lowermost petal diminished, contrary to the almost universal habit of other flowers to develop in such a position the lower petal chiefly, that it may have its full share of light. You will find nothing but blunder and embarrassment result from any endeavour to enter into further particulars, such as "the relation of the dissepiment with respect to the valves of the capsule," etc., etc., since "in the various species of Veronica almost every kind of dehiscence may be observed" (C. under V. perfoliata, 1986, an Australian species). Sibthorp gives the entire definition of Veronica with only one epithet added to mine, "Corolla quadrifida, *rotata*, laciniâ infimâ angustiore,"[2] but I do not know what "rotata" here means, as there is no appearance of revolved action in the petals, so far as I can see.

17. Of the mythic or poetic significance of the veronica, there is less to be said than of its natural beauty. I have

[1] [There does not, however, seem to be any reference to the shrub in Pinkerton's collection of *Voyages*. The quotation in the preceding lines is from Curtis's *Botanical Magazine*, vol. vii., letterpress to Plate 242, where the shrub is said to be "a native of Falkland's Island, introduced to this country by Dr. Fothergill, 1776." Perhaps "Pinkerton's" was a slip for "Humboldt's"; see above, p. 368 *n.*]

[2] [*Flora Græca*, vol. i. p. 5.]

not been able to discover with what feeling, or at what time, its sacred name was originally given; and the legend of S. Veronica[1] herself is, in the substance of it, irrational, and therefore incredible. The meaning of the term "rational," as applied to a legend or miracle, is, that there has been an intelligible need for the permission of the miracle at the time when it is recorded; and that the nature and manner of the act itself should be comprehensible in the scope. There was thus quite simple need for Christ to feed the multitudes, and to appear to S. Paul; but no need, so far as human intelligence can reach, for the reflection of His features upon a piece of linen which could be seen by not one in a million of the disciples to whom He might more easily, at any time, manifest Himself personally and perfectly. Nor, I believe, has the story of S. Veronica ever been asserted to be other than symbolic by the sincere teachers of the Church; and, even so far as in that merely explanatory function it became the seal of an extreme sorrow, it is not easy to understand how the pensive fable was associated with a flower so familiar, so bright, and so popularly of good omen, as the Speedwell.

18. Yet, the fact being actually so, and this consecration of the veronica being certainly far more ancient and earnest than the faintly romantic and extremely absurd legend of the forget-me-not; the speedwell has assuredly the higher claim to be given and accepted as a token of pure and faithful love, and to be trusted as a sweet sign that the innocence of affection is indeed more frequent, and the appointed destiny of its faith more fortunate, than our inattentive hearts have hitherto discerned.

19. And this the more, because the recognized virtues and uses of the plant are real and manifold; and the ideas of a peculiar honourableness and worth of life connected with it by the German popular name "Honour-prize"; while to the heart of the British race, the same thought

[1] For another reference to the legend, see *Modern Painters*, vol. v. (Vol. VII. pp. 294–295).]

is brought home by Shakespeare's adoption of the flower's Welsh name, for the faithfullest common soldier of his ideal king.[1] As a lover's pledge, therefore, it does not merely mean memory;—for, indeed, why should love be thought of as such at all, if it need to promise not to forget?—but the blossom is significant also of the lover's best virtues, patience in suffering, purity in thought, gaiety in courage, and serenity in truth: and therefore I make it, worthily, the clasping and central flower of the Cytherides.

[1] [Fluellen in *Henry V.* See above, p. 444.]

## CHAPTER IV

### GIULIETTA [1]

1. SUPPOSING that, in early life, one had the power of living to one's fancy,—and why should we not, if the said fancy were restrained by the knowledge of the two great laws concerning our nature, that happiness is increased, not by the enlargement of the possessions, but of the heart; and days lengthened, not by the crowding of emotions, but the economy of them?—if thus taught, we had, I repeat, the ordering of our house and estate in our own hands, I believe no manner of temperance in pleasure would be better rewarded than that of making our gardens gay only with common flowers; and leaving those which needed care for their transplanted life to be found in their native places when we travelled. So long as I had crocus and daisy in the spring, roses in the summer, and hollyhocks and pinks in the autumn, I used to be myself independent of farther horticulture,—and it is only now that I am old, and since pleasant travelling has become impossible to me, that I am thankful to have the white narcissus in my borders, instead of waiting to walk through the fragrance of the meadows of Clarens;[2] and pleased to see the milkwort blue on my scythe-mown banks, since I cannot gather it any more on the rocks of the Vosges, or in the divine glens of Jura.

2. Among the losses, all the more fatal in being unfelt, brought upon us by the fury and vulgarity of modern life, I count for one of the saddest, the loss of the wish to gather a flower in travelling. The other day,—whether indeed a sign of some dawning of doubt and remorse in the

[1] [The Polygala; see above, p. 356.]

[2] [For notices of the narcissus meadows of Vevay (Clarens), see *Modern Painters*, vol. iii. (Vol. V. p. 284); and of the milkwort, *Seven Lamps*, Vol. VIII. p. 223.]

public mind, as to the perfect jubilee of railroad journey, or merely a piece of the common daily flattery on which the power of the British press first depends, I cannot judge; —but, for one or other of such motives, I saw lately in some illustrated paper, a pictorial comparison of old-fashioned and modern travel, representing, as the type of things passed away, the outside passengers of the mail shrinking into huddled and silent distress from the swirl of a winter snowstorm; and for type of the present Elysian dispensation, the inside of a first-class saloon carriage, with a beautiful young lady in the last pattern of Parisian travelling dress, conversing, *Daily News* in hand, with a young officer—her fortunate vis-à-vis—on the subject of our military successes in Afghanistan and Zululand.*

3. I will not, in presenting—it must not be called, the other side, but the supplementary, and wilfully omitted, facts, of this ideal,—oppose, as I fairly might, the discomforts of a modern cheap excursion train, to the chariot-and-four, with out-riders and courier, of ancient noblesse. I will compare only the actual facts, in the former and in latter years, of my own journey from Paris to Geneva. As matters are now arranged, I find myself, at half-past eight in the evening, waiting in a confused crowd with which I am presently to contend for a seat, in the dim light and cigar-stench of the great station of the Lyons line. Making slow way through the hostilities of the platform, in partly real, partly weak politeness, as may be, I find the corner seats of course already full of prohibitory cloaks and umbrellas; but manage to get a middle back one; the net overhead is already surcharged with a bulging extra portmanteau, so that I squeeze my desk as well as I can between my legs, and arrange what wraps I have

* See letter on the last results of our African campaigns, in the *Morning Post* of April 14th, of this year.[1]

[1] [1882. The reference is to extracts from an article in the *Natal Mercury*, deploring the abandonment of Sir Bartle Frere's policy. England, says the writer, "is suffering its name to become a byword, its word a mockery, and its power less than a name amongst people whose only fault has been their loyalty to itself."]

about my knees and shoulders. Follow a couple of hours of simple patience, with nothing to entertain one's thoughts but the steady roar of the line under the wheels, the blinking and dripping of the oil lantern, and the more or less ungainly wretchedness, and variously sullen compromises and encroachments of posture, among the five other passengers preparing themselves for sleep: the last arrangement for the night being to shut up both windows, in order to effect, with our six breaths, a salutary modification of the night air.

4. The banging and bumping of the carriages over the turn-tables wakes me up as I am beginning to doze, at Fontainebleau, and again at Sens; and the trilling and thrilling of the little telegraph bell establishes itself in my ears, and stays there, trilling me at last into a shivering, suspicious sort of sleep, which, with a few vaguely fretful shrugs and fidgets, carries me as far as Tonnerre, where the "quinze minutes d'arrêt" revolutionize everything; and I get a turn or two on the platform, and perhaps a glimpse of the stars, with promise of a clear morning; and so generally keep awake past Mont Bard, remembering the happy walks one used to have on the terrace under Buffon's tower,[1] and thence watching, if perchance, from the mouth of the high tunnel, any film of moonlight may show the far undulating masses of the hills of Citeaux. But most likely one knows the place where the great old view used to be only by the sensible quickening of the pace as the train turns down the incline, and crashes through the trenched cliffs into the confusion and high clattering vault of the station at Dijon.

5. And as my journey is almost always in the spring-time, the twisted spire of the cathedral[2] usually shows itself against the first grey of dawn, as we run out again southwards; and resolving to watch the sunrise, I fall more

[1] [Buffon (1707–1788) lived in the château at Mont Bard; a high square tower, of the thirteenth century, which stands in the grounds, commands an extensive view, and in it the great naturalist made his study.]

[2] [See Vol. VII. p. 34.]

complacently asleep,—and the sun is really up by the time one has to change carriages, and get morning coffee at Macon. And from Amberieux, through the Jura valley, one is more or less feverishly happy and thankful, not so much for being in sight of Mont Blanc again, as in having got through the nasty and gloomy night journey; and then the sight of the Rhone and the Salève seems only like a dream, presently to end in nothingness; till, covered with dust, and feeling as if one never should be fit for anything any more, one staggers down the hill to the Hôtel des Bergues, and sees the dirtied Rhone, with its new iron bridge, and the smoke of a new factory exactly dividing the line of the aiguilles of Chamouni.

6. That is the journey as it is now,—and as, for me, it must be; except on foot, since there is now no other way of making it. But this *was* the way we used to manage it in old days:—

Very early in Continental transits we had found out that the family travelling carriage, taking much time and ingenuity to load, needing at the least three, usually four-horses, and on Alpine passes six, not only jolted and lagged painfully on bad roads, but was liable in every way to more awkward discomfitures than lighter vehicles; getting itself jammed in archways, wrenched with damage out of ruts, and involved in volleys of justifiable reprobation among market stalls. So when we knew better, my father and mother always had their own old-fashioned light two-horse carriage to themselves, and I had one made with any quantity of front and side pockets for books and picked up stones; and hung very low, with a fixed side-step, which I could get off or on with the horses at the trot; and at any rise or fall of the road, relieve them, and get my own walk, without troubling the driver to think of me.

7. Thus, leaving Paris in the bright spring morning, when the Seine glittered gaily at Charenton,[1] and the arbres

[1] [Compare *Modern Painters*, vol. iv. (Vol. VI. p. 421); and for the "arbres de Judée," Vol. VII. p. xxviii.]

de Judée were mere pyramids of purple bloom round Villeneuve-St.-Georges, one had an afternoon walk among the rocks of Fontainebleau, and next day we got early into Sens, for new lessons in its cathedral aisles, and the first saunter among the budding vines of the coteaux. I finished my plate of the Tower of Giotto, for the *Seven Lamps*, in the old inn at Sens,[1] which Dickens has described in his wholly matchless way in the last chapter of *Mrs. Lirriper's Lodgings*.[2] The next day brought us to the oolite limestones at Mont Bard, and we always spent the Sunday at the Bell in Dijon. Monday, the drive of drives, through the village of Genlis, the fortress of Auxonne, and up the hill to the vine-surrounded town of Dole; whence, behold at last the limitless ranges of Jura, south and north, beyond the woody plain, and above them the "Derniers Rochers" and the white square-set summit, worshipped ever anew.[3] Then at Poligny, the same afternoon, we gathered the first milkwort for that year; and on Tuesday, at St. Laurent, the wild lily of the valley; and on Wednesday, at Morez, gentians.

And on Thursday, the *eighth or ninth* day from Paris, days all spent patiently and well, one saw from the gained height of Jura, the great Alps unfold themselves in their chains and wreaths of incredible crest and cloud.

8. Unhappily, during all the earliest and usefullest years of such travelling, I had no thought of ever taking up botany as a study; feeling well that even geology, which was antecedent to painting with me, could not be followed out in connection with art but under strict limits, and with sore shortcomings.* It has only been the later discovery

* I deliberately, not garrulously, allow more autobiography in *Proserpina* than is becoming, because I know not how far I may be permitted to carry on that which was begun in *Fors*.[4]

[1] [See Vol. VIII. pp. xxxv. 15.]

[2] [The correct reference is to *Mrs. Lirriper's Legacy*, the sequel (Christmas Number of *All the Year Round*, 1864) to *Mrs. Lirriper's Lodgings* (1863). For other references to the book, see *Art of England*, § 150, and *Præterita*, ii. § 208.]

[3] [Compare the description of the first sight of the Derniers Rochers and *calotte* of Mont Blanc in *Præterita*, i. § 190.]

[4] [This chapter was issued in 1882, before Ruskin had begun *Præterita*.]

of the uselessness of old scientific botany, and the abominableness of new, as an element of education for youth; —and my certainty that a true knowledge of their native Flora was meant by Heaven to be one of the first heart-possessions of every happy boy and girl in flower-bearing lands, that have compelled me to gather into system my fading memories, and wandering thoughts. And of course in the diaries written at places of which I now want chiefly the details of the Flora, I find none; and in this instance of the milkwort, whose name I was first told by the Chamouni guide, Joseph Couttet, then walking with me on the unperilous turf of the first rise of the Vosges,[1] west of Strasburg, and rebuking me indignantly for my complaint that, being then thirty-seven years old, and not yet able to draw the great plain and distant spire, it was of no use trying in the poor remainder of life to do anything serious,—then, and there, I say, for the first time examining the strange little flower, and always associating it, since, with the limestone crags of Alsace and Burgundy, I don't find a single note of its preferences or antipathies in other districts, and cannot say a word about the soil it chooses, or the height it ventures, or the familiarities to which it condescends, on the Alps or Apennines.

9. But one thing I have ascertained of it, lately at Brantwood, that it is capricious and fastidious beyond any other little blossom I know of. In laying out the rock garden, most of the terrace sides were trusted to remnants of the natural slope, propped by fragments of stone, among which nearly every other wild flower that likes sun and air, is glad sometimes to root itself. But at the top of all, one terrace was brought to mathematically true level of surface, and slope of side, and turfed with delicately chosen and adjusted sods, meant to be kept duly trim by the scythe. And *only* on this terrace does the Giulietta choose to show herself,—and even there, not in any consistent

[1] [At the end of May 1856.]

places, but gleaming out here in one year, there in another, like little bits of unexpected sky through cloud; and entirely refusing to allow either bank or terrace to be mown the least trim during *her* time of disport there. So spared and indulged, there are no more wayward things in all the woods or wilds; no more delicate and perfect things to be brought up by watch through day and night, than her recumbent clusters, trickling, sometimes almost gushing through the grass, and meeting in tiny pools of flawless blue.

10. I will not attempt at present to arrange the varieties of the Giulietta, for I find that all the larger and presumably characteristic forms belong to the Cape; and only since Mr. Froude came back from his African explorings[1] have I been able to get any clear idea of the brilliancy and associated infinitude of the Cape flowers. If I could but write down the substance of what he has told me, in the course of a chat or two, which have been among the best privileges of my recent stay in London[2] (prolonged as it has been by recurrence of illness), it would be a better summary of what should be generally known in the natural history of southern plants than I could glean from fifty volumes of horticultural botany. In the meantime, everything being again thrown out of gear by the aforesaid illness, I must let this piece of *Proserpina* break off, as most of my work does—and as perhaps all of it may soon do—leaving only suggestion for the happier research of the students who trust me thus far.

11. Some essential points respecting the flower I shall note, however, before ending. There is one large and frequent species of it of which the flowers are delicately yellow, touched with tawny red forming one of the chief elements of wild foreground vegetation in the healthy

[1] [The reference is to Froude's political mission to South Africa in 1874–1875. Occasional references to the flora of the Cape are made in his "Leaves from a South African Journal" in the third volume of his *Short Studies*.]

[2] [At Herne Hill, in the early spring of 1882.]

districts of hard Alpine limestone.* This is, I believe, the only European type of the large Cape varieties, in all of which, judging from such plates as have been accessible to me, the crests or fringes of the lower petal are less conspicuous than in the smaller species; and the flower almost takes the aspect of a broom-blossom or pease-blossom. In the smaller European varieties, the white fringes of the lower petal are the most important and characteristic part of the flower, and they are, among European wild flowers, absolutely without any likeness of associated structure. The fringes or crests which, towards the origin of petals, so often give a frosted or gemmed appearance to the centres of flowers, are here thrown to the extremity of the petal, and suggest an almost coralline structure of blossom, which in no other instance whatever has been imitated, still less carried out into its conceivable varieties of form. How many such varieties might have been produced if these fringes of the Giulietta, or those already alluded to of Lucia nivea,[1] had been repeated and enlarged; as the type, once adopted for complex bloom in the thistle-head, is multiplied in the innumerable gradations of thistle, teasel, hawkweed, and aster! We might have had flowers edged with lace finer than was ever woven by mortal fingers, or tasselled and braided with fretwork of silver, never tarnished—or hoarfrost that grew brighter in the sun. But it was not to be, and after a

* In present Botany, Polygala Chamæbuxus; C. 316: or, in English, Much Milk Ground-box. It is not, as matters usually go, a name to be ill thought of, as it really contains three ideas; and the plant does, without doubt, somewhat resemble box, and grows on the ground;—far more fitly called "ground-box" than the Veronica "ground-oak."[2] I want to find a pretty name for it in connection with Savoy or Dauphiné, where it indicates, as above stated, the *healthy* districts of *hard* limestone. I do not remember it as ever occurring among the dark and moist shales of the inner mountain ranges, which at once confine and pollute the air.

[1] [See above, ch. ii. § 3, p. 423.]
[2] [See above, p. 441.]

few hints of what might be done in this kind, the Fate, or Folly, or, on recent theories, the extreme fitness—and consequent survival, of the Thistles and Dandelions, entirely drives the fringed Lucias and blue-flushing milkworts out of common human neighbourhood, to live recluse lives with the memories of the abbots of Cluny, and pastors of Piedmont.

12. I have called the Giulietta "blue-*flushing*" because it is one of the group of exquisite flowers which at the time of their own blossoming, breathe their colour into the surrounding leaves and supporting stem. Very notably the Grape hyacinth and Jura hyacinth, and some of the Vestals, empurpling all their green leaves even to the ground: a quite distinct nature in the flower, observe, this possession of a power to kindle the leaf and stem with its own passion, from that of the heaths, roses, or lilies, where the determined bracts or calices assert themselves in opposition to the blossom, as little pine-leaves, or mosses, or brown-paper packages, and the like.

13. The Giulietta, however, is again entirely separate from the other leaf-flushing blossoms, in that, after the two green leaves next the flower have glowed with its blue, while it lived, they do not fade or waste with it, but return to their own former green simplicity, and close over it to protect the seed. I only know this to be the case with the Giulietta Regina; but suppose it to be (with variety of course in the colours) a condition in other species,—though of course nothing is ever said of it in the botanical accounts of them. I gather, however, from Curtis's careful drawings[1] that the prevailing colour of the Cape species is purple, thus justifying still further my placing them among the Cytherides; and I am content to take the descriptive epithets at present given them, for the following five of this southern group, hoping that they may be explained for me afterwards by helpful friends.

[1] [Polygala Cordifolia, No. 2438 in vol. I. of the *Botanical Magazine*; and Polygala Myrtifolia, No. 3616 in vol. lxiv.]

14. Bracteolata, C. 845.
Oppositifolia, C. 492.
Speciosa, C. 1790.

These three all purple, and scarcely distinguishable from sweet pease-blossom, only smaller.

Stipulacea, C. 1715. Small, and very beautiful, lilac and purple, with a leaf and mode of growth like rosemary. The "Foxtail" milkwort, whose name I don't accept, C. 1006, is intermediate between this and the next species.

15. Mixta, C. 1714. I don't see what mingling is meant, except that it is just like Erica tetralix[1] in the leaf, only, apparently, having little four-petalled pinks for blossoms. This appearance is thus botanically explained. I do not myself understand the description, but copy it, thinking it may be of use to somebody. "The apex of the carina is expanded into a two-lobed plain petal, the lobes of which are emarginate. This appendix is of a bright rose colour, and forms the principal part of the flower." The describer relaxes, or relapses, into common language so far as to add that "this appendix" "dispersed among the green foliage in every part of the shrub, gives it a pretty lively appearance." Perhaps this may also be worth extracting:—

"Carina, deeply channelled, *of a saturated purple* within, sides folded together, so as to include and firmly embrace the style and stamens, which, when arrived at maturity, upon being moved, escape elastically from their confinement, and strike against the two erect petals or alæ—by which the pollen is dispersed.

"Stem shrubby, with long flexile branches." (Length or height not told. I imagine like an ordinary heath's.)

The term "carina," occurring twice in the above description, is peculiar to the structure of the pease and milkworts; we will examine it afterwards.[2] The European varieties of the milkwort, except the chamæbuxus, are all minute,—and, their ordinary epithets being at least inoffensive, I give them for reference till we find prettier

[1] [See Line-study I. (Plate X., p. 205.]
[2] [This, however, was not done.]

ones; altering only the Calcarea, because we could not have a "Chalk Juliet," and two varieties of the Regina, changed for reason good—her name, according to the last modern refinements of grace and ease in pronunciation, being Eu-vulgaris, var. genuina! My readers may more happily remember her and her sister as follows:—

16. (I.) Giulietta Regina. Pure blue. The same in colour, form, and size, throughout Europe.

(II.) Giulietta Soror-Reginæ. Pale, reddish-blue or white in the flower, and smaller in the leaf, otherwise like the Regina.

(III.) Giulietta Depressa. The smallest of those I can find drawings of. Flowers, blue; lilac in the fringe, and no bigger than pins' heads; the leaves quite gem-like in minuteness and order.

(IV.) Giulietta Cisterciana. Its present name, "Calcarea," is meant, in botanic Latin, to express its growth on limestone or chalk mountains. But we might as well call the South Down sheep, Calcareous mutton. My epithet will rightly associate it with the Burgundian hills round Cluny and Citeaux. Its ground leaves are much larger than those of the Depressa; the flower a little larger, but very pale.

(V.) Giulietta Austriaca. Pink, and very lovely, with bold cluster of ground leaves, but itself minute—almost dwarf. Called "small bitter milkwort" by S. How far distinct from the next following one, Norwegian, is not told.

The above five kinds are given by Sowerby as British, but I have never found the Austriaca myself.

(VI.) Giulietta Amara. Norwegian. Very quaint in blossom outline, like a little blue rabbit with long ears. D. 1169.

17. Nobody tells me why either this last or No. 5 have been called bitter; and Gerarde's five kinds are distinguished

only by colour—blue, red, white, purple, and "the dark, of an overworn ill-favoured colour, which maketh it to differ from all others of his kind."[1] I find no account of this ill-favoured one elsewhere. The white is my Soror Reginæ; the red must be the Austriaca; but the purple and overworn ones are perhaps now overworn indeed. All of them must have been more common in Gerarde's time than now, for he goes on to say—

"Milkwoort is called *Ambarualis flos*, so called because it doth specially flourish in the Crosse or Gang-weeke, or Rogation-weeke, of which flowers, the maidens which use in the countries to walk the procession do make themselves garlands and nosegaies, in English we may call it Crosse flower, Gang flower, Rogation flower, and Milk-woort."

18. Above, at page 356, in first arranging the Cytherides, I too hastily concluded that the ascription to this plant of helpfulness to nursing mothers was "more than ordinarily false"; thinking that its rarity could never have allowed it to be fairly tried. If indeed true, or in any degree true, the flower has the best right of all to be classed with the Cytherides, and we might have as much of it for beauty and for service as we chose, if we only took half the pains to garnish our summer gardens with living and life-giving blossom, that we do to garnish our winter gluttonies with dying and useless ones.

19. I have said nothing of root, or fruit, or seed, having never had the hardness of heart to pull up a milkwort cluster—nor the chance of watching one in seed:—the pretty thing vanishes as it comes, like the blue sky of April, and leaves no sign of itself—that *I* ever found. The botanists tell me that its fruit "dehisces loculicidally,"[2] which I suppose is botanic for "splits like boxes" (but boxes shouldn't split, and didn't, as we used to make and handle them before railways). Out of the split boxes fall seeds—too few; and, as aforesaid, the plant never seems to

[1] [*The Herball*, 1597, vol. i. p. 450.]

[2] [Which, being interpreted, is "that dehisces (bursts open) through the back or dorsal structure loculus": so Hooker (*Stud. Flora*, 46) of the polygala, "loculicidally splitting along the edges."]

grow again in the same spot. I should thankfully receive any notes from friends happy enough to live near milkwort banks, on the manner of its nativity.

20. Meanwhile, the Thistle, and the Nettle, and the Dock, and the Dandelion are cared for in their generations by the finest arts of—Providence, shall we say? or of the spirits appointed to punish our own want of Providence? May I ask the reader to look back to the seventh chapter of the first volume, for it contains suggestions of thoughts which came to me at a time of very earnest and faithful inquiry, set down, I now see too shortly, under the press of reading they involved, but intelligible enough if they are read as slowly as they were written, and especially note the paragraph of summary of p. 294 on the power of the Earth Mother, as Mother, and as *Judge;* watching and rewarding the conditions which induce adversity and prosperity in the kingdoms of men: comparing with it carefully the close of the fourth chapter, p. 264,* which contains, for the now recklessly multiplying classes of artists and colonists, truths essential to their skill, and inexorable upon their labour.

21. The pen-drawing facsimiled by Mr. Allen with more than his usual care in the frontispiece to this number[1] of *Proserpina* [Plate XXVII.], was one of many executed during the investigation of the schools of Gothic (German, and later French), which founded their minor ornamentation on the serration of the thistle leaf, as the Greeks on that

* Which, with the following page [p. 265], is the summary of many chapters of *Modern Painters:* and of the aims kept in view throughout *Munera Pulveris.*[2] The three kinds of Desert specified—of Reed, Sand, and Rock—should be kept in mind as exhaustively including the states of the earth neglected by man. For instance of a Reed desert, produced *merely* by his neglect, see Sir Samuel Baker's account of the choking up of the bed of the White Nile. Of the sand desert, Sir W. G. Palgrave's journey from the Djowf to Hāyel, vol. i., p. 92.[3]

[1] [As originally published in Parts; the Plate is now given in this place.]

[2] [See, for instance, *Munera Pulveris*, § 159 (Vol. XVII. p. 281), and *Modern Painters*, vol. v. (Vol. VII. p. 425).]

[3] [*The Albert Nyanza, Great Basin of the Nile, and Explorations of the Nile Sources*, by Samuel White Baker, 1866, vol. ii. pp. 329 *seq.* *Narrative of a Year's Journey through Central and Eastern Arabia* (1862–1863), by William Gifford Palgrave, 2 vols., 1865.]

of the Acanthus,[1] but with a consequent, and often morbid, love of thorny points, and insistence upon jagged or knotted intricacies of stubborn vegetation, which is connected in a deeply mysterious way with the gloomier forms of Catholic asceticism.*

22. But also, in beginning *Proserpina*, I intended to give many illustrations of the light and shade of foreground leaves belonging to the nobler groups of thistles, because I thought they had been neglected by ordinary botanical draughtsmen; not knowing at that time either the original drawings at Oxford for the *Flora Græca*,[2] or the nobly engraved plates executed in the close of the last century for the *Flora Danica* and *Flora Londinensis*.[3] The latter is, in the most difficult portraiture of the larger plants, even the more wonderful of the two; and had I seen the miracles of skill, patience, and faithful study which are collected in the first and second volumes, published in 1777 and 1798, I believe my own work would never have been undertaken.† Such as it is, however, I may still, health being granted me, persevere in it; for my own leaf and branch studies express conditions of shade which even these most exquisite botanical plates ignore; and exemplify uses of the pen and pencil which cannot be learned from the inimitable fineness of line engraving. The frontispiece to this number, for instance (a seeding head of the commonest field-thistle of

* This subject is first entered on in the *Seven Lamps*,[4] and carried forward in the final chapters of *Modern Painters*, to the point where I hope to take it up for conclusion, in the sections of *Our Fathers have Told Us* devoted to the history of the fourteenth century.[5]

† See in the first volume, the plates of Sonchus Arvensis and Tussilago Petasites; in the second, Carduus tomentosus and Picris Echioides.

[1] [For notices of the acanthus in Greek and Venetian architecture, see Vol. V. p. 268, Vol. IX. pp. 38 *n.*, 376, and Vol. X. pp. 23, 159.]

[2] [See above, p. 408 *n.*]

[3] [For *Flora Danica*, see Vol. XIII. p. 530, and Vol. XV. p. 482. The other book is *Flora Londiniensis; or, Plates and Descriptions of such Plants as grow wild in the Environs of London*, by William Curtis, 5 vols., 1777–1828.]

[4] [See Vol. VIII. p. 112.]

[5] [For the reference here to *Modern Painters*, see, for instance, Vol. VII. pp. 262, 424. For the General Plan of what Ruskin intended to include in *Our Fathers have Told Us*, see *Bible of Amiens*, Appendix iii.]

Drawn by J Ruskin Engraved by G Allen

STATES OF ADVERSITY.

our London suburbs), copied with a steel pen on smooth grey paper, and the drawing softly touched with white on the nearer thorns, may well surpass the effect of the plate.

28. In the following number of *Proserpina* I have been tempted to follow, with more minute notice than usual, the "conditions of adversity"[1] which, as they fret the thistle tribe into jagged malice, have humbled the beauty of the great domestic group of the Vestals[2] into confused likenesses of the Dragonweed and Nettle: but I feel every hour more and more the necessity of separating the treatment of subjects in *Proserpina* from the microscopic curiosities of recent botanic illustration, nor shall this work close, if my strength hold, without fulfilling in some sort, the effort begun long ago in *Modern Painters*, to interpret the grace of the larger blossoming trees,[3] and the mysteries of leafy form which clothe the Swiss precipice with gentleness, and colour with softest azure the rich horizons of England and Italy.

[1] [See the title to Plate XXVII., and compare the phrase "adverse temper" on p. 289.]
[2] [See above, p. 355.]
[3] [See below, p. 482, and the following chapter (comparing p. 496 *n.*).]

# CHAPTER V

## BRUNELLA[1]

1. It ought to have been added to the statements of general law in irregular flowers, in Chapter I. of this volume, § 6 [p. 890], that if the petals, while brought into relations of inequality, still retain their perfect petal form,—and whether broad or narrow, extended or reduced, remain clearly *leaves*, as in the pansy, pea, or azalea, and assume no grotesque or obscure outline,—the flower, though injured, is not to be thought of as corrupted or misled. But if any of the petals lose their definite character as such, and become swollen, solidified, stiffened, or strained into any other form or function than that of petals, the flower is to be looked upon as affected by some kind of constant evil influence; and, so far as we conceive of any spiritual power being concerned in the protection or affliction of the inferior orders of creatures, it will be felt to bear the aspect of possession by, or pollution by, a more or less degraded Spirit.*

* For the sense in which this word is used throughout my writings, see the definition of it in the 52nd paragraph of *The Queen of the Air*, comparing, with respect to its office in plants, §§ 59–60 [Vol. XIX. pp. 356-358].

[1] [Here Ruskin takes up an example of his order "Vestales"—the brunella. The plant's name comes from the German Bräune (quinsy), because it was believed to heal that complaint (so Gerarde, i. p. 507): see below, p. 470. Hence its English name, "Self-heal." Prunella, as it is often called, is merely a softened form of Brunella. Ruskin, however, disputes this commonly accepted history of the plant's name. He emphasises the brown in its colour-effect (§ 7); he calls it "this Brownie flower" (§ 11), thus connecting it with the dark elves; and seems to suggest that from such ideas it received the name Brunella (see § 10, where he connects it with the French *brune*). Its use as a specific in throat diseases having been discovered, the name came to be connected, so Ruskin suggests (§ 9), with the German Bräune.]

2. I have already enough spoken of the special manifestation of this character in the orders Contorta and Satyrium, vol. i., p. 848, and the reader will find the parallel aspects of the Draconidæ dwelt upon at length in the 86th and 87th paragraphs of *The Queen of the Air*,[1] where also their relation to the labiate group is touched upon. But I am far more embarrassed by the symbolism of that group which I called "Vestales," from their especially domestic character and their serviceable purity; but which may be, with more convenience perhaps, simply recognizable as "Menthæ."

3. These are, to our northern countries, what the spice-bearing trees are in the tropics;—our thyme, lavender, mint, marjoram, and their like, separating themselves not less in the health-giving or strengthening character of their scent from the flowers more or less enervating in perfume, as the rose, orange, and violet,—than in their humble colours and forms from the grace and splendour of those higher tribes; thus allowing themselves to be summed under the general word "balm" more truly than the balsams from which the word is derived. Giving the most pure and healing powers to the air around them; with a comfort of warmth also, being mostly in dry places, and forming sweet carpets and close turf; but only to be rightly enjoyed in the open air, or indoors when dried; not tempting any one to luxury, nor expressive of any kind of exultation. Brides do not deck themselves with thyme, nor do we wreathe triumphal arches with mint.

4. It is most notable, also, farther, that none of these flowers have any extreme beauty in colour. The blue sage is the only one of vivid hue at all; and we never think of it as for a moment comparable to the violet or bluebell: thyme is unnoticed beside heath, and many of the other purple varieties of the group are almost dark and sad-coloured among the flowers of summer; while, so far from gaining beauty on closer looking, there is scarcely a

[1] [Vol. XIX. pp. 375, 377.]

blossom of them which is not more or less grotesque, even to ugliness, in outline; and so hooded or lappeted as to look at first like some imperfect form of snapdragon: for the most part spotted also, wrinkled as if by old age or decay, cleft or torn, as if by violence, and springing out of calices which, in their clustering spines, embody the general roughness of the plant.

5. I take at once for example, lest the reader should think me unkind or intemperate in my description, a flower very dear and precious to me; and at this time my chief comfort in field walks. For, now, the reign of all the sweet reginas of the spring is over—the reign of the silvia and anemone, of viola and veronica; and at last, and this year abdicated under tyrannous storm,* the reign of the rose. And the last foxglove-bells are nearly fallen; and over all my fields and by the brooksides are coming up the burdock, and the coarse and vainly white aster, and the black knapweeds; and there is only one flower left to be loved among the grass,—the soft, warm-scented Brunelle.

6. "*P*runell, *or* Brunell"—Gerarde calls it;[1] and Brunella, rightly and authoritatively, Tournefort; Prunella, carelessly, Linnæus, and idly following him, the moderns, casting out all the meaning and help of its name—of which presently. Self-heale, Gerarde and Gray[2] call it, in English—meaning that who has this plant needs no physician.[3]

7. As I look at it, close beside me, it seems as if it would reprove me for what I have just said of the poverty of colour in its tribe; for the most glowing of violets could not be lovelier than each fine purple gleam of its hooded blossoms. But their flush is broken and oppressed by the dark calices out of which they spring, and their utmost power in the field is only of a saddened amethystine lustre,

* Written in 1880.

[1] [*The Herball*, 1597, vol. i. p. 507.]
[2] [Samuel Frederick Gray: *A Natural Arrangement of British Plants*, 1821, vol. ii. p. 389.]
[3] [Matthew ix. 12.]

subdued with furry brown. And what is worst in the victory of the darker colour is the disorder of the scattered blossoms;—of all flowers I know, this is the strangest, in the way that here and there, only in their cluster, its bells rise or remain, and it always looks as if half of them had been shaken off, and the top of the cluster broken short away altogether.

8. We must never lose hold of the principle that every flower is meant to be seen by human creatures with human eyes, as by spiders with spider eyes. But as the painter may sometimes play the spider, and weave a mesh to entrap the heart, so the beholder may play the spider, when there are meshes to be disentangled that have entrapped his mind. I take my lens, therefore—to the little wonder of a brown wasps' nest with blue-winged wasps in it,—and perceive therewith the following particulars.

9. First, that the blue of the petals is indeed pure and lovely, and a little crystalline in texture; but that the form and setting of them is grotesque beyond all wonder; the two uppermost joined being like an old-fashioned and enormous hood or bonnet, and the lower one projecting far out in the shape of a cup or cauldron, torn deep at the edges into a kind of fringe.

Looking more closely still, I perceive there is a cluster of stiff white hairs, almost bristles, on the top of the hood; for no imaginable purpose of use or decoration—any more than a hearth-brush put for a helmet-crest,—and that, as we put the flower full in front, the lower petal begins to look like some threatening viperine or shark-like jaw, edged with ghastly teeth,—and yet more, that the hollow within begins to suggest a resemblance to an open throat in which there are two projections where the lower petal joins the lateral ones, almost exactly like swollen glands.

I believe it was this resemblance, inevitable to any careful and close observer, which first suggested the use of the plant in throat diseases to physicians; guided, in those first days of pharmacy, chiefly by imagination. Then the

German name for one of the most fatal of throat affections, Bräune, extended itself into the first name of the plant, Brunelle.

10. The truth of all popular traditions as to the healing power of herbs will be tried impartially as soon as men again desire to lead healthy lives; but I shall not in *Proserpina* retain any of the names of their gathered and dead or distilled substance, but name them always from the characters of their life. I retain, however, for this plant its name Brunella, Fr. Brunelle, because we may ourselves understand it as a derivation from Brune; and I bring it here before the reader's attention as giving him a perfectly instructive general type of the kind of degradation which takes place in the forms of flowers under more or less malefic influence, causing distortion and disguise of their floral structure. Thus it is not the normal character of a flower petal to have a cluster of bristles growing out of the middle of it, nor to be jagged at the edge into the likeness of a fanged fish's jaw, nor to be swollen or pouted into the likeness of a diseased gland in an animal's throat. A really uncorrupted flower suggests none but delightful images, and is like nothing but itself.

11. I find that in the year 1719, Tournefort defined, with exactitude which has rendered the definition authoritative for all time, the tribe to which this Brownie flower belongs, constituting them his fourth class, and describing them in terms even more depreciatingly imaginative than any I have ventured to use myself.

12. I translate the passage (vol. i., p. 177):[1]—

"The name of Labiate flower is given to a single-petaled flower which, beneath, is attenuated into a tube, and above is expanded into a lip, which is either single or double. It is proper to a labiate flower,—first, that it has a one-leaved calyx (ut calycem habeat *unifolium*), for the most part tubulated, or reminding one of a paper hood (cucullum papyraceum); and, secondly, that its pistil ripens into a fruit consisting of four seeds, which ripen in the calyx itself, as if in their own seed-vessel, by which a labiate flower is

[1] [*Josephi Pitton Tournefort . . . Institutiones Rei Herbariæ*, editio tertia, Paris, 1719. Ruskin's quotations in § 13 are from pp. 177, 183, 191.]

distinguished from a personate one, whose pistil becomes a capsule far divided from the calyx (à calyce longè divisam). And a labiate flower differs from rotate, or bell-shaped flowers, which have four seeds, in that the lips of a labiate flower have a gape like the face of a goblin, or ludicrous mask, emulous of animal form."

18. This class is then divided into four sections.

In the first, the upper lip is helmeted, or hooked—"galeatum est, vel falcatum."

In the second, the upper lip is excavated like a spoon—"cochlearis instar est excavatum."

In the third the upper lip is erect.

And in the fourth there is no upper lip at all.

The reader will, I hope, forgive me for at once rejecting a classification of lipped plants into three classes that have lips, and one that has none, and in which the lips of those that have got any, are like helmets and spoons.

Linnæus, in 1758, grouped the family into two divisions by the form of the calyx (five-fold or two-fold), and then went into the wildest confusion in distinction of species,—sometimes by the form of corolla, sometimes by that of calyx, sometimes by that of the filaments, sometimes by that of the stigma, and sometimes by that of the seed. As, for instance, thyme is to be identified by the calyx having hairs in its throat, dead nettle by having bristles in its mouth, lion's tail by having bones in its anthers (antheræ punctis osseis adspersæ), and teucrium by having its upper lip cut in two![1]

14. St. Hilaire, in 1805, divides again into four sections,[2]

[1] [The edition of 1758 does not contain the words quoted. But see *Caroli Linnæi Botanicorum Principis Systema Plantarum Europæ* (Cologne, 1785), vol. iv. pp. 1–56. Classis xiv., Didynamia Gymnospermia, (1) Calyces subquinquefidi, (2) Calyces bilabiati. Thyme is No. 785; dead-nettle (Lamium), No. 774 (faux utrinque margine dentata); teucrium, No. 764 (labium superius bipartitum); and lion's-tail, No. 780. With regard to this latter, though the description in the list of contents (p. 1) is (as Ruskin quotes) "antheræ punctis osseis adspersæ," yet in the text (p. 40) it is "antheræ punctis nitidis adspersæ," and the later is the reading in Gmelin's edition of Linnæus (1788).]

[2] [The editors are unable to trace the reference here. "St. Hilaire" is presumably the botanist, Augustin-François-César, commonly called Auguste Prouvensal de Saint-Hilaire (1779–1853); but he published nothing in 1805; and the classification, spoken of in the text, does not occur either in his principal work *Flora Brasiliæ* (1825), or in his *Leçons de Botanique* (1841).]

but as three of these depend on form of corolla, and the fourth on abortion of stamens, the reader may conclude practically, that logical division of the family is impossible, and that all he can do, or that there is the smallest occasion for his doing, is first to understand the typical structure thoroughly, and then to know a certain number of forms accurately, grouping the others round them at convenient distances; and, finally, to attach to their known forms such simple names as may be utterable by children, and memorable by old people, with more ease and benefit than the "Galeopsis Eu-te-trahit," "Lamium Galeobdalon," or "Scutellaria Galericulata,"[1] and the like, of modern botany. But to do this rightly, I must review and amplify some of my former classification, which it will be advisable to do in a separate chapter.

[1] ["Galeopsis Tetrahit" (Eu-te-trahit ?) is one of the varieties of Hemp-nettle; "Lamium Galeobdalon," Yellow Archangel, a variety of Dead-nettle (see p. 515 n.); and "Scutellaria Galericulata" is Skull-cap.]

# CHAPTER VI

## MONACHA[1]

1. It is not a little vexing to me, in looking over the very little I have got done of my planned Systema Proserpinæ, to discover a grave mistake in the specifications of Veronica. It is Veronica chamædrys, not officinalis, which is our proper English Speedwell, and Welsh Fluellen; and all the eighth paragraph, p. 448, properly applies to that. Veronica officinalis is an extremely small flower rising on vertical stems out of recumbent leaves; and the drawing of it in the *Flora Danica*, which I mistook for a stunted northern state, is quite true of the English species,* except that it does not express the recumbent action of the leaves. The proper representation of ground-leafage has never yet been attempted in any botanical work whatever; and as, in recumbent plants, their grouping and action can only be seen from above, the plates of them should always have a dark and rugged background, not only to indicate the position of the eye, but to relieve the forms of the leaves as they were intended to be shown. I will try to give some examples in the course of this year.

2. I find also, sorrowfully, that the references are wrong in three, if not more, places in that chapter.[2] I wish it

* The plate of Chamædrys, D. 448, is also quite right, and not "too tall and weedlike," as I have called it at p. 441.

---

[1] [Pedicularis, or Lousewort (pediculus=louse): "our farmers have an opinion that sheep feeding on them become subject to vermin, whence the English name" (J. Hill, *British Herbal*, 1756, p. 120). Called also, more pleasantly, "red rattle" (Gerarde, vol. ii. p. 913): see below, p. 478.]

[2] [Here followed a statement of the errata (see above, Bibliographical Note, p. 194); they have been corrected in the present text.]

were likely that these errors had been corrected by my readers,—the rarity of the *Flora Danica* making at present my references virtually useless: but I hope in time that our public institutes will possess themselves of copies: still more do I hope that some book of the kind will be undertaken by English artists and engravers, which shall be worthy of our own country.

8. Farther, I get into confusion by not always remembering my own nomenclature, and have allowed "Gentianoides" to remain, for No. 16 (p. 446), though I banish Gentian. It will be far better to call this Eastern mountain species "Olympica": according to Sibthorp's localization, "in summâ parte, nive solutâ, montis Olympi Bithyni,"[1] and the rather that Curtis's plate above referred to[2] shows it in luxuriance to be liker an asphodel than a gentian.

4. I have also perhaps done wrong in considering Veronica polita and agrestis as only varieties, in No. 8 (p. 442). No author tells me why the first is called polite, but its blue seems more intense than that of agrestis; and as it is above described with attention, vol. i., p. 257, as an example of precision in flower-form, we may as well retain it in our list here. It will be therefore our twenty-first variety,—it is Loudon's fifty-ninth and last.[3] He translates "polita" simply "polished," which is nonsense. I can think of nothing to call it but "dainty," and will leave it at present unchristened.

5. Lastly. I can't think why I omitted V. Humifusa, S. 979, which seems to be quite one of the most beautiful of the family—a mountain flower also, and one which I ought to find here; but hitherto I know only among the mantlings of the ground, V. thymifolia and officinalis. All these, however, agree in the extreme prettiness and grace of their crowded leafage,—the officinalis, of which the leaves are shown much too coarsely serrated in S. 984, forming

[1] [*Flora Græca*, vol. i., Plate 5.]
[2] [See p. 446. Plate 1002 in the *Botanical Magazine*.]
[3] [*Encyclopædia of Plants*, vol. i. p. 16.]

carpets of finished embroidery which I have never yet rightly examined, because I mistook them for St. John's wort. They are of a beautiful pointed oval form, serrated so finely that they seem smooth in distant effect, and covered with equally invisible hairs, which seem to collect towards the edge in the variety Hirsuta, S. 985.

For the present, I should like the reader to group the three flowers, S. 979, 984, 985, under the general name of Humifusa, and to distinguish them by a third epithet, which I allow myself when in difficulties, thus:—

V. Humifusa, cærulea, the beautiful blue one, which resembles Spicata.
V. Humifusa, officinalis, and,
V. Humifusa, hirsuta: the last seems to me extremely interesting, and I hope to find it and study it carefully.

By this arrangement we shall have only twenty-one species to remember: the one which chiefly decorates the ground again dividing into the above three.

6. These matters being set right, I pass to the business in hand, which is to define as far as possible the subtle relations between the Veronicas and Draconidæ, and again between these and the tribe at present called labiate. In my classification above, p. 358, the Draconidæ include the Nightshades; but this was an oversight. Atropa belongs properly to the following class, Moiridæ; and my Draconids are intended to include only the two great families of Personate and Ringent flowers, which in some degree resemble the head of an animal: the representative one being what we call "snapdragon," but the French, careless of its snapping power, "calf's muzzle"—"Muflier, mufflaude, or muffle de Veau."—Rousseau, *Lettres*, p. 19.[1]

7. As I examine his careful and sensible plates of it,

[1] [At p. 14 of *La Botanique de J. J. Rousseau; Lettres Élémentaires sur la Botanique*, Paris, 1805. Compare i. ch. xiv. § 13 (p. 384); and the Introduction, p. xxxix.]

I chance also on a bit of his text, which, extremely wise and generally useful, I translate forthwith:—

"I understand, my dear, that one is vexed to take so much trouble without learning the names of the plants one examines; but I confess to you in good faith that it never entered into my plan to spare you this little chagrin. One pretends that Botany is nothing but a science of words, which only exercises the memory, and only teaches how to give plants names. For me, I know *no* rational study which is only a science of words: and to which of the two, I pray you, shall I grant the name of botanist,—to him who knows how to spit out a name or a phrase at the sight of a plant, without knowing anything of its structure, or to him who, knowing that structure very well, is ignorant nevertheless of the very arbitrary name that one gives to the plant in such and such a country? If we only gave to your children an amusing occupation, we should miss the best half of our purpose, which is, in amusing them, to exercise their intelligence and accustom them to attention. Before teaching them to name what they see, let us begin by teaching them to see it. *That* science, forgotten in all educations, ought to form the most important part of theirs. I can never repeat it often enough—teach them never to be satisfied with words ("se payer de mots"), and to hold themselves as knowing nothing of what has reached no farther than their memories."

8. Rousseau chooses, to represent his "Personées," La Mufflaude, la Linaire, l'Euphraise, la Pediculaire, la Crête-de-coq, l'Orobanche, la Cimbalaire, la Velvote, la Digitale, giving plates of snapdragon, foxglove, and Madonna-herb (the Cimbalaire), and therefore including my entire class of Draconidæ, whether open or close throated. But I propose myself to separate from them the flower which, for the present, I have called Monacha, but may perhaps find hereafter a better name;[1] this one, which is the best Latin I can find for a nun of the desert, being given to it because all the resemblance either to calf or dragon has ceased in its rosy petals, and they resemble—the lower ones those of the mountain thyme, and the upper one a softly crimson cowl or hood.

9. This beautiful mountain flower, at present, by the good grace of botanists, known as Pedicularis, from a disease which it is supposed to give to sheep, is distinguished from all other Draconidæ by its beautifully divided leaves:

[1] [See, however, the note at the end of ch. vii. (below, p. 498).]

while the flower itself, like, as aforesaid, thyme in the three lower petals, rises in the upper one quite upright, and terminates in the narrow and peculiar hood from which I have named it "Monacha."

10. Two deeper crimson spots with white centres animate the colour of the lower petals in our mountain kind—mountain or morass;—it is vilely drawn in S. 997 under the name of Sylvatica, translated "Procumbent"! As it is neither a wood flower nor a procumbent one,* and as its rosy colour is rare among morass flowers, I shall call it simply Monacha Rosea.

I have not the smallest notion of the meaning of the following sentence in S.:—"Upper lip of corolla not rostrate, with the margin on each side furnished with a triangular tooth immediately below the apex, but without any tooth below the middle." Why, or when, a lip is rostrate, or has any "tooth below the middle," I do not know; but the upper *petal* of the corolla is here a very close gathered hood, with the style emergent downwards, and the stamens all hidden and close set within.

In this action of the upper petal, and curve of the style, the flower resembles the Labiates,† and is the proper link between them and the Draconidæ. The capsule is said by S. to be oval-ovoid. As eggs always *are* oval, I don't feel farther informed by the double epithet. The capsule and seed both are of entirely indescribable shapes, with any number of sides—very foxglove-like, and inordinately large. The seeds of the entire family are "ovoid-subtrigonous."—S.

11. I find only two species given as British by S., namely, Sylvatica and Palustris; but I take first (1) for

* "Stems numerous from the crown of the root-stock, de-cumbent."—S. The effect of the flower upon the ground is always of an extremely upright and separate plant, never appearing in clusters,[1] or in any relation to a central root. My epithet "rosea" does not deny its botanical de- or pro-cumbency.

† Compare especially Galeopsis Angustifolia, D. 3031.

[1] [In a list of errata at the end of ch. vii. (see above, p. 192), Ruskin said: "I meant, in close masses. It forms exquisite little rosy crowds, on ground that it likes."]

the Regina, the beautiful Arctic species D. 1105, Flora Suecica, 555. Rose-coloured in the stem, pale pink in the flowers (corollæ pallide incarnatæ), the calices furry against the cold, whence the present ugly name, Hirsuta. Only on the highest crests of the Lapland Alps.

(2) Rosea, D. 225, there called Sylvatica, as by S., presumably because "in pascuis subhumidis non raræ." Beautifully drawn, but, as I have described it, vigorously erect, and with no decumbency whatever in any part of it. Root branched, and enormous in proportion to plant, and I fancy therefore must be good for something if one knew it. But Gerarde, who calls the plant Red Rattle (it having indeed much in common with the Yellow Rattle), says, "It groweth in moist and moorish meadows; the herbe is not only unprofitable, but likewise hurtful, and an infirmity of the meadows."[1]

(3) Palustris, D. 2055, S. 996—scarcely any likeness between the plates. "Everywhere in the meadows," according to D. I leave the English name, Marsh Monacha, much doubting its being more marshy than others.

12. I take next (4 and 5) two northern species, Lapponica, D. 2, and Grönlandica, D. 1166; the first yellow, the second red, both beautiful. The Lap one has its divided leaves almost united into one lovely spear-shaped single leaf. The Greenland one has its red hood much prolonged in front.

(6) Ramosa, also a Greenland species; yellow, very delicate and beautiful. Three stems from one root, but may be more or fewer, I suppose.

13. (7) Norvegica, a beautifully clustered golden flower, with thick stem, D. 80, the only locality given being the Dovrefeldt. "Alpina" and "Flammea" are the synonyms, but I do not know it on the Alps, and it is no more flame-coloured than a cowslip.

Both the Lapland and Norwegian flowers are drawn

[1] [*The Herball*, 1597, vol. ii. p. 913.]

with their stems wavy, though upright—a rare and pretty habit of growth.

14. (8) Suecica, D. 26, named awkwardly Sceptrum Carolinum, in honour of Charles XII. It is the largest of all the species drawn in D., and contrasts strikingly with (4) and (5) in the strict uprightness of its stem. The corolla is closed at the extremity, which is red; the body of the flower pale yellow. Grows in marshy and shady woods, near Upsal. (Linn., *Flora Suecica*, 553.)

The many-lobed but united leaves, at the root five or six inches long, are irregularly beautiful.

15. These eight species are all I can specify, having no pictures of the others named by Loudon,—eleven, making nineteen altogether, and I wish I could find a twentieth and draw them all, but the reader may be well satisfied if he clearly know these eight. The group they form is an entirely distinct one, exactly intermediate between the Vestals and Draconids, and cannot be rightly attached to either; for it is Draconid in structure and affinity—Vestal in form—and I don't see how to get the connection of the three families rightly expressed without taking the Draconidæ out of the groups belonging to the dark Kora, and placing them next the Vestals, with the Monachæ between; for indeed Linaria and several other Draconid forms are entirely innocent and beautiful, and even the Foxglove never does any real mischief like hemlock, while decoratively it is one of the most precious of mountain flowers. I find myself also embarrassed by my name of Vestals, because of the masculine groups of Basil and Thymus, and I think it will be better to call them simply Menthæ, and to place them with the other cottage-garden plants not yet classed, taking the easily remembered names Mentha, Monacha, Draconida.[1] This will leave me a blank seventh place among my twelve orders at p. 353, vol. i., which I think I shall fill by taking cyclamen and anagallis out

[1] [See, however, the note at the end of ch. vii. (below, p. 498).]

of the Primulaceæ,[1] and making a separate group of them. These retouchings and changes are inevitable in a work confessedly tentative and suggestive only; but in whatever state of the imperfection I may be forced to leave *Proserpina*, it will assuredly be found, up to the point reached, a better foundation for the knowledge of flowers in the minds of young people than any hitherto adopted system of nomenclature.

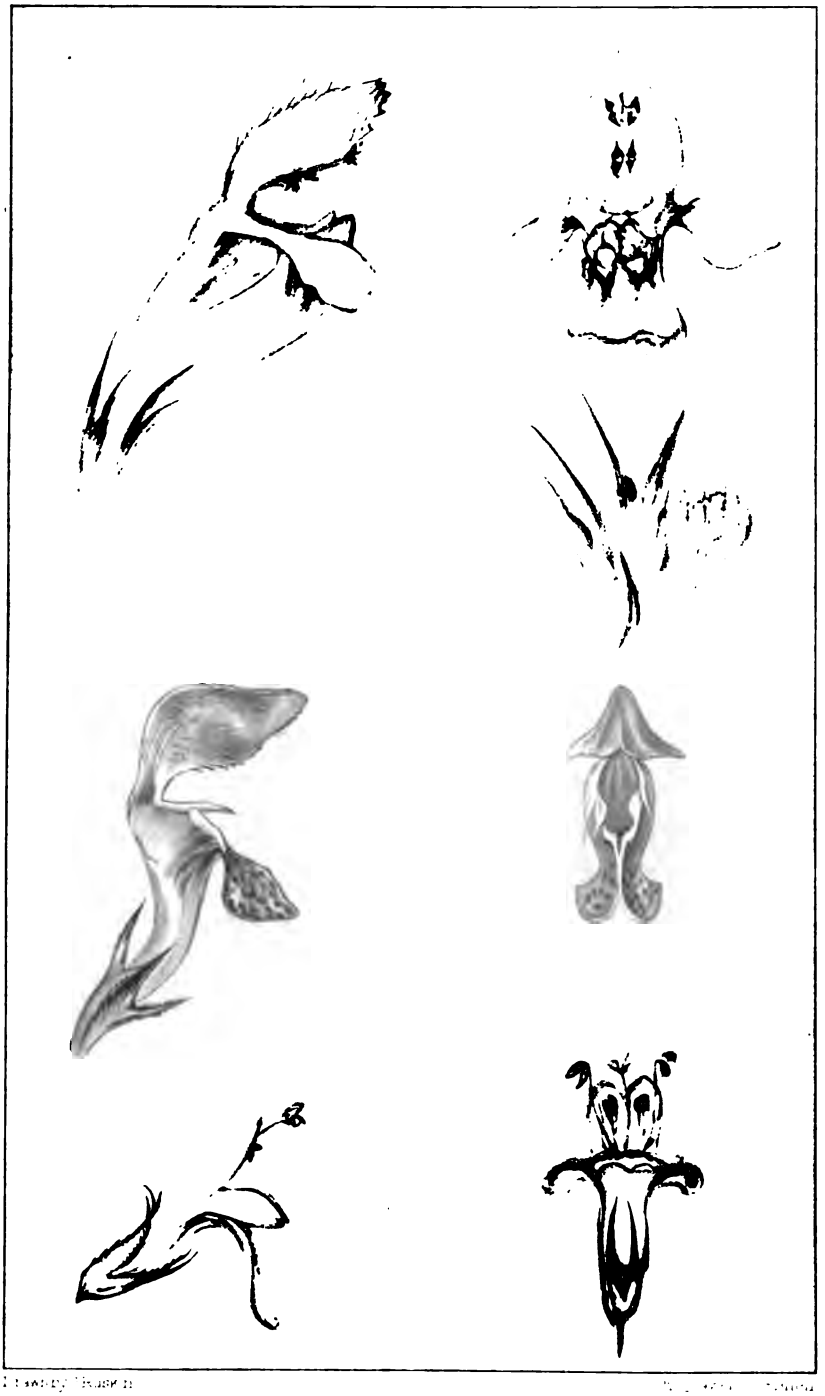
16. Taking then this re-arranged group, Mentha, Monacha, and Draconida, as a sufficiently natural and convenient one, I will briefly give the essentially botanical relations of the three families.

Mentha and Monacha agree in being essentially hooded flowers, the upper petal more or less taking the form of a cup, helmet or hood, which conceals the tops of the stamens. Of the three lower petals, the lowest is almost invariably the longest; it sometimes is itself divided again into two, but may be best thought of as single, and with the two lateral ones, distinguished in the Menthæ as the apron and the side pockets.

Plate XXVIII. represents the most characteristic types of the blossoms of Menthæ, in the profile and front views, all a little magnified. The upper two are white basil, purple spotted—growing here at Brantwood always with two terminal flowers. The two middle figures are the purple-spotted dead nettle, Lamium maculatum; and the two lower, thyme: but I have not been able to draw these as I wanted, the perspectives of the petals being too difficult, and inexplicable to the eye even in the flowers themselves without continually putting them in changed positions.

17. The Menthæ are in their structure essentially quadrate plants; their stems are square, their leaves opposite, their stamens either four or two, their seeds two-carpeled. But their calices are five-sepaled, falling into divisions of two and three; and the flowers, though essentially four-petaled,

[1] [Ruskin here relapses into ordinary botany; he means his "Cyllenides": see p. 353.]



MENTHÆ

Profile and front views of blossoms

(Enlarged)

may divide either the upper or lower petal, or both, into two lobes, and so present a six-lobed outline. The entire plants, but chiefly the leaves, are nearly always fragrant, and always innocent. None of them sting, none prick, and none poison.

18. The Draconids, easily recognizable by their aspect, are botanically indefinable with any clearness or simplicity. The calyx may be five- or four-sepaled; the corolla, five- or four-lobed; the stamens may be two, four, four with a rudimentary fifth, or five with the two anterior ones longer than the other three! The capsule may open by two, three, or four valves,—or by pores; the seeds, generally numerous, are sometimes solitary, and the leaves may be alternate, opposite, or verticillate.

19. Thus licentious in structure, they are also doubtful in disposition. None that I know of are fragrant, few useful, many more or less malignant, and some parasitic. The following piece of a friend's letter almost makes me regret my rescue of them from the dark kingdom of Kora:—

". . . And I find that the Monacha Rosea (Red Rattle is its name, besides the ugly one) is a perennial, and several of the other Draconidæ, foxglove, etc., are biennials, born this year, flowering and dying next year, and the size of roots is generally proportioned to the life of plants; except when artificial cultivation develops the root specially, as in turnips, etc. Several of the Draconidæ are parasites, and suck the roots of other plants, and have only just enough of their own to catch with. The Yellow Rattle is one; it clings to the roots of the grasses and clovers, and no cultivation will make it thrive without them. My authority for this last fact is Grant Allen; but I have observed for myself that the Yellow Rattle has very small *white* sucking roots, and no earth sticking to them. The toothworts and broom rapes are Draconidæ, I think, and wholly parasites. Can it be that the Red Rattle is the one member of the family that has 'proper pride, and is self-supporting'? the others are mendicant orders. We had what we choose to call the Dorcas flower show yesterday, and we gave, as usual, prizes for wild flower bouquets. I tried to find out the local names of several flowers, but they all seemed to be called 'I don't know, ma'am.' I would not allow this name to suffice for the red poppy, and I said, 'This red flower *must* be called *something*—tell me what you call it?' A few of the audience answered 'Blind Eyes.' Is it because they have to do with sleep that they are called Blind Eyes—or because they are dazzling?"

20. I think, certainly, from the dazzling, which sometimes with the poppy, scarlet geranium, and nasturtium,

is more distinctly oppressive to the eye than a real excess of light.

I will certainly not include among my rescued Draconidæ, the parasitic Lathræa and Orobanche; and cannot yet make certain of any minor classification among those which I retain,—but, uniting Bartsia with Euphrasia, I shall have, in the main, the three divisions Digitalis, Linaria, Euphrasia, and probably separate the moneyworts as links with Veronica, and Rhinanthus as links with Lathræa.

And as I shall certainly be unable this summer, under the pressure of resumed work at Oxford,[1] to spend time in any new botanical investigations, I will rather try to fulfil the promise given in the last number, to collect what little I have been able hitherto to describe or ascertain, respecting the higher modes of tree structure.

[1] [The chapter must thus have been written in 1883, when Ruskin resumed the Slade Professorship at Oxford.]

# CHAPTER VII

## SCIENCE IN HER CELLS

(The following chapter has been written six years.[1] It was delayed in order to complete the promised clearer analysis of stem-structure;[2] which, after a great deal of chopping, chipping, and peeling of my oaks and birches, came to reverently hopeless pause. What is here done may yet have some use in pointing out to younger students how they may simplify their language, and direct their thoughts, so as to attain, in due time, to reverent hope.)

1. THE most generally useful book, to myself, hitherto, in such little time as I have for reading about plants, has been Lindley's *Ladies' Botany;*[3] but the most rich and true I have yet found in illustration, the *Histoire des Plantes,** by Louis Figuier. I should like those of my readers who can afford it to buy both these books; the first-named, at any rate, as I shall always refer to it for structural drawings, and on points of doubtful classification; while the second contains much general knowledge, expressed with some really human intelligence and feeling; besides some good and singularly *just* history of botanical discovery and the men who guided it. The botanists, indeed, tell me proudly, "Figuier is no authority." But who wants authority? Is there nothing known yet about plants, then, which can be taught to a boy or girl, without referring them to an "authority"?

I, for my own part, care only to gather what Figuier can teach concerning things visible, to any boy or girl, who live within reach of a bramble hedge, or a hawthorn

* Octavo: Paris, Hachette, 1865.

[1] [In this connexion, see the Introduction, above, p. xxxiii. n.]

[2] [See above, pp. 300–319.]

[3] [See above, p. 272; and for Figuier, p. 235. Ruskin's references in §§ 3, 5, 7, are to pp. 28, 34.]

thicket, and can find authority enough for what they are told, in the sticks of them.

2. If only *he* would, or could, tell us clearly that much; but like other doctors, though with better meaning than most, he has learned mainly to look at things with a microscope,—rarely with his eyes. And I am sorry to see, on re-reading this chapter of my own, which is little more than an endeavour to analyse and arrange the statements contained in his second, that I have done it more petulantly and unkindly than I ought; but I can't do all the work over again, now,—more's the pity. I have not looked at this chapter for a year, and shall be sixty before I know where I am;—(I find myself, instead, now, sixty-four !).

3. But I stand at once partly corrected in this second chapter of Figuier's, on the "Tige," French from the Latin "Tignum," which "authorities" say is again from the Sanscrit, and means "the thing hewn with an axe"; anyhow it is modern French for what we are to call the stem (§ 12, p. 307):—

> "The tige," then, begins M. Louis, "is the axis of the ascending system of a vegetable, and it is garnished at intervals with vital knots (eyes), from which spring leaves and buds, disposed in a perfectly regular order. The root presents nothing of the kind. This character permits us always to distinguish, in the vegetable axis, what belongs really to the stem, and what to the root."

4. Yes; and that is partly a new idea to me, for in this power of *assigning their order* for the leaves, the stem seems to take a royal or commandant character, and cannot be merely defined as the connection of the leaf with the roots.

In *it* is put the spirit of determination. One cannot fancy the little leaf, as it is born, determining the point it will be born at: the governing stem must determine that for it. Also the disorderliness of the root is to be noted for a condition of its degradation, no less than its love, and need, of Darkness.

Nor was I quite right (vol. i., ch. viii. § 15, p. 309) in calling the stem *itself* "spiral": it is itself a straight-growing rod, but one which, as it grows, lays the buds of

future leaves round it in a spiral order, like the bas-relief on Trajan's column.

5. I go on with Figuier: the next passage is very valuable:—

"The tige is the part of plants which, directed into the air, supports, and *gives growing power to*, the branches, the twigs, the leaves, and the flowers. The form, strength, and direction of the tige depend on the part that each plant has to play among the vast vegetable population of our globe. Plants which need for their life a pure and often-renewed air, are borne by a straight tige, robust and tall. When they have need only of a moist air, more condensed, and more rarely renewed, when they have to creep on the ground or glide in thickets, the tiges are long, flexible, and dragging. If they are to float in the air, sustaining themselves on more robust vegetables, they are provided with flexible, slender, and supple tiges."

6. Yes; but in that last sentence he loses hold of his main idea, and to me the important one,—namely, the connection of the form of stem with the quality of the air it requires. And that idea itself is at present vague, though most valuable, to me. A strawberry creeps, with a flexible stem, but requires certainly no less pure air than a wood-fungus, which stands up straight. And in our own hedges and woods, are the wild rose and honeysuckle signs of unwholesome air?

> "And honeysuckle loved to crawl
> Up the lone crags and ruined wall.
> I deemed such nooks the sweetest shade
> The sun in all his round surveyed."[1]

It seems to me, in the nooks most haunted by honeysuckle in my own wood, that the reason for its twining is a very feminine one,—that it likes to twine; and that all these whys and wherefores resolve themselves at last into—what a modern philosopher, of course, cannot understand —caprice.*

* See in the tenth chapter what I have been able, since this sentence was written, to notice on the matter in question.[2]

[1] [*Marmion:* Introduction to Canto iii.]

[2] ["Tenth" is here a correction for "ninth." Hitherto *Proserpina* has ended with chapter ix. ("Salvia Silvarum"); chapter x. ("Of Caprice in Flowers") is now added from a printed proof, and at the time of writing the above note Ruskin must have intended to make it chapter ix.]

7. Farther on, Figuier, quoting St. Hilaire,[1] tells us, of the creepers in primitive forests:—

"Some of them resemble waving ribands, others coil themselves and describe vast spirals; they droop in festoons, they wind hither and thither among the trees, they fling themselves from one to another, and form masses of leaves and flowers in which the observer is often at a loss to discover on which plant each several blossom grows."

For all this, the real reasons will be known only when human beings become reasonable. For, except a curious naturalist or wistful missionary, no Christian has trodden the labyrinths of delight and decay among these garlands, but men who had no other thought than how to cheat their savage people out of their gold, and give them gin and smallpox in exchange. But, so soon as true servants of Heaven shall enter these Edens, and the Spirit of God enter with them, another spirit will also be breathed into the physical air; and the stinging insect, and venomous snake, and poisonous tree, pass away before the power of the regenerate human soul.

8. At length, on the structure of the tige, Figuier[2] begins his real work, thus:—

"A glance of the eye, thrown on the section of a log of wood destined for warming, permits us to recognize that the tige of the trees of our forests presents three essential parts, which are, in going from within to without, the pith, the wood, and the bark. The pith (in French, marrow) forms a sort of column in the centre of the woody axis. In very thick and old stems its diameter appears very little; and it has even for a long time been supposed that the marrow ends by disappearing altogether from the stems of old trees. But it does nothing of the sort;* and it is now ascertained, by exact measures, that its diameter remains sensibly invariable† from the moment when the young woody axis begins to consolidate itself, to the epoch of its most complete development."

* I envy the French their generalized form of denial, "Il n'en est rien."

† "Sensiblement invariable"; "unchanged, *so far as we can see*," or to general sense; microscopic and minute change not being considered.

[1] [Figuier (p. 34) gives no reference; it is, no doubt, to some of Prouvençal de Saint-Hilaire's South American travels.]

[2] [Here the references are to p. 41 of the *Histoire des Plantes*.]

So far, so good; but what does he mean by the complete development of the young *woody* axis? When does the axis become "wooden," and how far up the tree does he call it an axis? If the stem divides into three branches, which is the axis? And is the pith in the trunk no thicker than in each branch?

9. He proceeds to tell us, "The marrow is formed by a reunion of cells."—Yes, and so is Newgate, and so was the Bastille. But what does it matter whether the marrow is made of a reunion of cells, or cellars, or walls, or floors, or ceilings? I want to know what's the use of it? why doesn't it grow bigger with the rest of the tree? when *does* the tree "consolidate itself"? when is it finally consolidated? and how can there be always marrow in it when the weary frame of its age remains a mere scarred tower of war with the elements, full of dust and bats?

"He will tell you if only you go on patiently," thinks the reader. He will not! Once your modern botanist gets into cells, he stays in them. Hear how he goes on!—"This cell is a sort of sack; this sack is completely closed; sometimes it is empty, sometimes it"—is full?—no, that would be unscientific simplicity: sometimes it "conceals a matter in its interior." "The marrow of young trees, such as it is represented in Figure 29[1] (Figuier, Figs. 38, 39, p. 42), is nothing else"—(indeed!)—"than an aggregation of cells which, first of spherical form, have become polyhedric by their increase and mutual compression."

10. Now these figures, 38 and 39, which profess to represent this change, show us sixteen oval cells, such as at A (Fig. 29), enlarged into thirteen larger, and flattish, hexagons!—B, placed at a totally different angle.

And before I can give you the figure revised with any available accuracy, I must know why or how the cells are enlarged, and in what direction.

Do their walls lengthen laterally when they are empty,

[1] [Ruskin's Figure 29 being adapted from Figuier's figures, 38 and 39.]

or does the "matière" inside stuff them more out (itself increased from what sources?) when they are full? In either case, during this change from circle to hexagon, is the marrow getting thicker without getting longer? If so, the change in the angle of the cells is intentional, and probably is so; but the number of cells should have been the same: and further, the term "hexagonal" can only be applied to the *section* of a tubular cell, as in honeycomb,

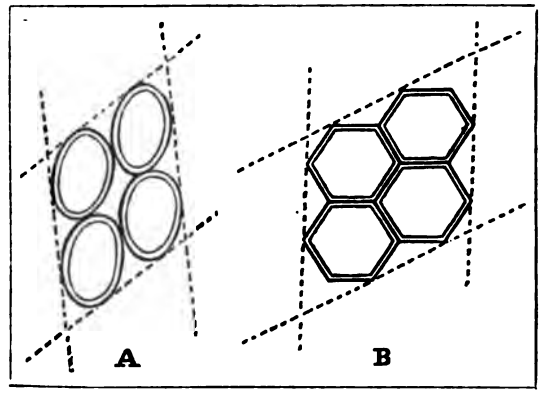



Fig. 29

so that the floor and ceiling of our pith cell are left undescribed.

11. Having got thus much of (partly conjectural) idea of the mechanical structure of marrow, here follows the solitary vital, or mortal, fact in the whole business, given in one crushing sentence at the close:—

"The medullary tissue" (first time of using this fine phrase for the marrow,—why can't he say marrowy tissue —"tissue moelleuse"?) "appears very early struck with atony" ("atonie," want of tone), "above all, in its central parts." And so ends all he has to say for the present about the marrow! and it never appears to occur to him for a moment, that if indeed the noblest trees live all their lives in a state of healthy and robust paralysis, it is a

distinction, hitherto unheard of, between vegetables and animals!

12. Two pages farther on, however (p. 45), we get more about the marrow, and of great interest,—to this effect, for I must abstract and complete here, instead of translating.

"The marrow itself is surrounded, as the centre of an electric cable is, by its guarding threads—that is to say, by a number of cords or threads coming between it and the wood, and differing from all others in the tree.

"The entire protecting cylinder composed of them has been called the 'étui' (or needle-case) of the marrow. But each of the cords which together form this étui, is itself composed of an almost infinitely delicate thread twisted into a screw, like the common spring of a letter-weigher or a Jack-in-the-box, but of exquisite fineness." Upon this, two pages and an elaborate figure are given to these "trachées"—tracheas, the French call them,—and we are never told the measure of them, either in diameter or length,* and still less, the use of them!

I collect, however, in my thoughts, what I have learned thus far.

13. A tree stem, it seems, is a growing thing, cracked outside, because its skin won't stretch, paralysed inside, because its marrow won't grow, but which continues the process of its life somehow, by knitted nerves without any nervous energy in them, protected by spiral springs without any spring in them.

Stay—I am going too fast. That coiling is perhaps prepared for some kind of uncoiling; and I will try if I can't learn something about it from some other book—noticing, as I pause to think where to look, the advantage of our

* Moreover, the confusion between vertical and horizontal sections in pp. 46, 47, is completed by the misprint of vertical for horizontal in the third line of p. 43, and of horizontal for vertical in the fifth line from bottom of p. 46; while Figure 45 is to me totally unintelligible, this being, as far as can be made out by the lettering, a section of a tree stem which has its marrow on the outside!

English tongue in its pithy Saxon word, "pith," separating all our ideas of vegetable structure clearly from animal; while the poor Latin and French must use the entirely inaccurate words "medulla" and "moelle"; all, however, concurring in their recognition of a vital power of some essential kind in this white cord of cells: "Medulla, sive illa vitalis anima est, ante se tendit, longitudinem impellens." (Pliny, "Of the Vine," liber x., cap. xxi.) "Vitalis anima" —yes—*that* I accept; but "longitudinem impellens," I pause at; being not at all clear, yet, myself, about any impulsive power in the pith.*

14. However, I take up first, and with best hope, Dr. Asa Gray,[1] who tells me (Art. 211) that pith consists of parenchyma, "which is at first gorged with sap," but that many stems expand so rapidly that their pith is torn into a mere lining or into horizontal plates; and that as the stem grows older, the pith becomes dry and light, and is "then of no farther use to the plant." But of what use it ever was, we are not informed; and the Doctor makes us his bow, so far as the professed article on pith goes; but, farther on, I find in his account of "Sap-wood" (Art. 224), that in the germinating plantlet, the sap "ascends first through the parenchyma, especially through its central portion or pith." Whereby we are led back to our old question, what sap is, and where it comes from, with the now superadded question, whether the young pith is a mere succulent sponge, or an active power, and constructive mechanism, nourished by the abundant sap: as Columella has it,[2]—

"Naturali enim spiritu omne alimentum virentis quasi

* "Try a bit of rhubarb" (says A, who sends me a pretty drawing of rhubarb pith); but as rhubarb does not grow into wood, inapplicable to our present subject; and if we descend to annual plants, rush pith is the thing to be examined.

[1] [See above, p. 209.]
[2] [*De Re Rustica*, book iii. ch. x.]

quædam anima, per *medullam* trunci veluti per siphonem, trahitur in summum." *

As none of these authors make any mention of a *communication* between the cells of the pith, I conclude that the sap they are filled with is taken up by them, and used to construct their own thickening tissue.

15. Next, I take Balfour's *Structural Botany*,[1] and by his index, under the word "Pith," am referred to his articles 8, 72, and 75. In article 8, neither the word pith, nor any expression alluding to it, occurs.

In article 72, the stem of an outlaid tree is defined as consisting of "pith, fibro-vascular and † woody tissue, medullary, rays, bark, and epidermis."

A more detailed statement follows, illustrated by a figure surrounded by twenty-three letters—namely, two *b*s, three *c*s, four *e*s, three *f*s, one *l*, four *m*s, three *p*s, one *r*, and two *v*s.[2]

Eighteen or twenty minute sputters of dots may, with a good lens, be discerned to proceed from this alphabet, and to stop at various points, or lose themselves in the texture, of the represented wood. And, knowing now something of the matter beforehand, guessing a little more, and gleaning the rest with my finest glass, I achieve the elucidation of the figure, to the following extent, explicable without letters at all, by my more simple drawing, Figure 30.

16. (1) The inner circle full of little cells, diminishing in size towards the outside, represents the pith, "very large at this period of the growth" (the first year, we are told

* I am too lazy now to translate, and shall trust to the chance of some remnant, among my readers, of classical study, even in modern England.

† "*Or* woody tissue," suggests A. It is "and" in Balfour.

[1] [J. H. Balfour: *Manual of Botany, being an Introduction to the Study of the Structure, Physiology, and Classification of Plants*, 1860.]

[2] [Figures 96 and 97.]

in next page)—and "very large," he means in proportion to the rest of the branch. *How* large, he does not say, in his text, but states, in his note, that the figure is magnified 26 diameters. I have drawn mine by the more convenient multiplier of 30, and given the real size at B, *according to Balfour*:—but without believing him to be right. I never saw a maple stem of the first year so small.

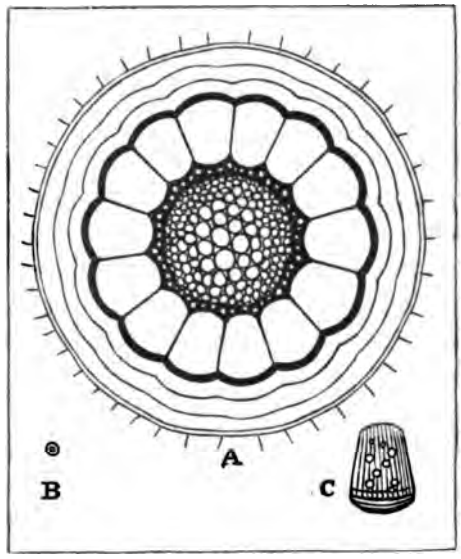



*Fig.* 30

(2) The black band with white dots round the marrow, represents the marrow-sheath.

(3) From the marrow-sheath run the marrow-rays "dividing the vascular circle into numerous compact segments."[1] A "ray" cannot divide anything into a segment. Only a partition, or a knife, can do that. But we shall find presently that marrow-*rays* ought to be called marrow-*plates*, and are really mural, forming more or less continuous partitions.

(4) The compact segments "consist of woody vessels and of porous vessels." This is the first we have heard of woody *vessels!* He means the "*fibres* ligneux" of Figuier; and represents them in each compartment, as at C (Fig. 30), without telling us why he draws the woody vessels as radiating. They appear to radiate, indeed, when wood is sawn across, but they are really upright.

(5) A moist layer of greenish cellular tissue called the cambium layer—black in Figure 30—and he draws it in flat arches, without saying why.

[1] [*Histoire des Plantes*, p. 40.]

(6) } Three layers of bark (called in his note Endo-
(7) } phlœum, Mesophlœum, and Epiphlœum !), with
(8) } "laticiferous vessels." *

(9) Epidermis. The three layers of bark being separated by single lines, I indicate the epidermis by a double one, with a rough fringe outside, and thus we have the parts of the section clearly visible and distinct for discussion, so far as this first figure goes,—without wanting one letter of all his three and twenty!

17. But on the next page, this ingenious author gives us a new figure, which professes to represent the same order of things in a longitudinal section; and in retracing that order sideways, instead of looking down, he not only introduces new terms, but misses one of his old layers in doing so,—thus:

His order, in explaining Figure 96, contains, as above, nine members of the tree stem.

But his order, in explaining Figure 97, contains only eight, thus:

(1) The pith. } Circles.
(2) Medullary sheath. }
(3) Medullary ray = a Radius.
(4) Vascular zone, with woody *fibres* (not now vessels!). The fibres are composed of spiral, annular, pitted, and other vessels.
(5) Inner bark or "liber," with layer of cambium cells.
(6) Second layer of bark, or "cellular envelope," with laticiferous vessels.
(7) Outer or tuberous layer of bark.
(8) Epidermis.

Doing the best I can to get at the muddle-headed gentleman's meaning, it appears, by the lettering of his Figure 97, my 29 above, that the "liber," number 5,

* Terms not used now, but others quite as bad: Cuticle, Epidermis, Cortical layer, Periderm, Cambium, Phelloderm—six hard words for "BARK," says my careful annotator. Yes; and these new six to be changed for six newer ones next year, no doubt.

contains the cambium layer in the middle of it. The part of the liber between the cambium and the wood is not marked in Figure 96;—but the cambium is number 5, and the liber outside of it is number 6,—the Endophlœum of his note.

Having got himself into this piece of lovely confusion he proceeds to give a figure of the wood in the second year, which I think he has borrowed, without acknowledgment, from Figuier,[1] omitting a piece of Figuier's woodcut which is unexplained in Figuier's text. I will spare my readers the work I have had to do, in order to get the statements on either side clarified: but I think they will find, if they care to work through the wilderness of the two authors' wits, that this which follows is the sum of what they have effectively to tell us; with the collated list of the main questions they leave unanswered—and, worse, unasked.

18. An ordinary tree branch, in transverse section, consists essentially of three parts only,—the Pith, Wood, and Bark.

The pith is in full animation during the first year—that is to say, during the actual shooting of the wood. We are left to infer that in the second year, the pith of the then unprogressive shoot becomes collective only, not formative: and that the pith of the new shoot virtually energises the new wood in its deposition beside the old one. Thus, let *a b*, Figure 31, be a shoot of the first year, and *b c* of the second. The pith remains of the same thickness in both but that of the new shoot is, I suppose, chiefly active in sending down the new wood to thicken the old one, which is collected, however, and fastened by the extending pith rays below. You see, I have given each shoot four fibres of wood for its own; then the four fibres of the upper one send out two to thicken the lower: the pith-rays, represented by the white transverse claws, catch and gather all

[1] [This cannot have been the case, for Balfour's book was the earlier of the two.]

together. Mind, I certify nothing of this to you; but if this do not happen,—let the botanists tell you what *does*.

19. Secondly. The wood, represented by these four lines, is to be always remembered as consisting of fibres and vessels; therefore it is called "vascular," a word which you may as well remember (though rarely needed in familiar English), with its roots, *vas*, a vase, and *vasculum*, a little vase or phial. "Vascule" may sometimes be allowed in botanical descriptions where "cell" is not clear enough; thus, at present, we find our botanists calling the pith "cellular," but the wood "vascular," with, I think, the implied meaning that a "vascule," little or large, is a long thing, and has some liquid in it, while a "cell" is a more or less round thing, and to be supposed empty, unless described as full. But what liquid fills the vascules of the wood, they do not tell us.* I assume that they absorb water, as long as the tree lives.

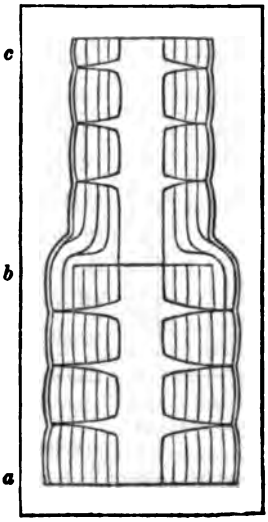


*Fig.* 31

20. Wood, whether vascular or fibrous, is however formed, in outlaid plants, first outside of the pith, and then, in shoots of the second year, outside of the wood of the first, and in the third year, outside of the wood of the second; so that supposing the quantity of wood sent down from the growing shoot distributed on a flat plane, the structure in the third year would be as in Figure 32. But since the new wood is distributed all round the stem (in successive cords or threads, if not at once), the increase of substance after a year or two would be untraceable, unless more shoots than one were formed at the extremity of the

* "At first the vessels are pervious and full of *fluid*, but by degrees thickening layers are deposited, which contract their canal."—BALFOUR.[1]

[1] [J. H. Balfour *Manual of Botany*, § 78, p. 44 (1860).]

branch. Of actual bud and branch structure, I gave introductory account long since in the fifth volume of *Modern Painters*,* to which I would now refer the reader;[1] but both then, and to-day, after twenty years' further time allowed me, I am unable to give the least explanation of the mode in which the wood is really added to the interior stem. I cannot find, even, whether this is mainly done in spring-time, or in the summer and autumn, when the young suckers form on the wood; but my impression is that though all the several substances are added annually, a little more pith going to the edges of the pith-plates, and a little more bark to the bark, with a great deal more wood to the wood,—there is a different or at least successive period for each deposit, the carrying all these elements to their places involving a fineness of basket work or web work in the vessels, which neither microscope nor dissecting tool can disentangle. The result on the whole, however, is practically that we have, outside the wood, always a mysterious "cambium layer," and then some distinctions in the bark itself, of which we must take separate notice.

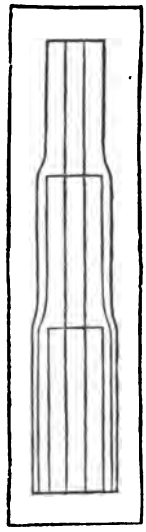


*Fig.* 82

21. Of Cambium, Dr. Gray's 220th article gives the following account:—

"It is not a distinct substance, but a layer of delicate new cells full of sap. The inner portion of the cambium layer is, therefore, nascent wood, and the outer nascent bark. As the cells of this layer multiply, the greater number lengthen vertically into *prosenchyma*, or woody tissue, while some are transformed into ducts" (wood vessels?) "and others remaining as *parenchyma*, continue the medullary rays, or commence new ones."

* I cannot better this earlier statement, which, in beginning *Proserpina*, I intended to form a part of that work; but, as readers already in possession of it in the original form, ought not to be burdened with its repetition, I shall republish those chapters as a supplement, which I trust may be soon issued.[2]

[1] [Vol. VII. pp. 24 *seq.*]

[2] [Ruskin, as we have seen (Vol. III. p. xlix.), intended to add to *In Montibus Sanctis* and *Cœli Enarrant* a third series of reprints from *Modern Painters*, dealing with Trees, but this design was never carried out.]

Nothing is said here of the part of the cambium which becomes bark: but at page 128, the thin-walled cells of the bark are said to be those of ordinary "parenchyma," and in the next page a very important passage occurs, which must have a paragraph to itself. I close the present one with one more protest against the entirely absurd terms "par-enchyma," for common cellular tissue, "pros-enchyma," for cellular tissue with longer cells;—"cambium" for an early state of *both*, and "diachyma" for a peculiar position of *one!** while the chemistry of all these substances is wholly neglected, and we have no idea given us of any difference in pith, wood, and bark, than that they are made of short or long—young or old—cells!

22. But in Dr. Gray's 230th article comes this passage of real value (italics mine—all):—

"While the newer layers of the wood abound in *crude* sap, which they convey to the leaves, those of the inner bark abound in *elaborated* sap, which *they receive from the leaves*, and convey to the *cambium* layer, or *zone of growth*. The proper juices and peculiar products of plants are accordingly found in the foliage and bark, especially the latter. In the bark, therefore, either of the stem or root, medicinal and other principles are usually to be sought, rather than in the wood. Nevertheless, as the wood is kept in connection with the bark by the medullary rays, many products which probably originate in the former are deposited in the wood."

23. Now, at last, I see my way to useful summary of the whole, which I had better give in a separate chapter: and will try in future to do the preliminary work of elaboration of the sap from my authorities, above shown, in its process, to the reader, without making so much fuss about it. But, I think in this case, it was desirable that the floods of pros-, par-, peri-, dia-, and circumlocution, through which one has to wade towards any emergent crag of fact in modern scientific books, should for once be seen

* "'Diachyma' is parenchyma in the middle of a leaf!" (Balfour, Art. 137.) Henceforward, if I ever make botanical quotations, I shall always call parenchyma, By-tis; prosenchyma, To-tis; and diachyma, Through-tis, short for By-tissue, To-tissue, and Through-tissue—then the student will see what all this modern wisdom comes to!

XXIX

Drawn by [illegible] Engraved [illegible]

VERONICA OFFICINALIS.

Leafage in foreground effect.

Drawn by [illegible]  Engraved [illegible]

VERONICA OFFICINALIS.

Leafage in foreground effect.

# CHAPTER VIII

## THE FOURFOLD STATE

1. "HOPING"—and I may now add, resolving,—"never to write such a tiresome chapter again" (as the seventh), I find myself assisted in the fulfilment of such resolve by the printers having broken up the type of half the chapter then following. I take this for providential inspiration on their part,—pin the remaining fragments together, and present them here for what good they may be to anybody. The chapter had its title from old Boston's book on the *Fourfold State of Man*.[1] Neither four nor forty would enough number the manifold states whether of men or trees; only it seems the material of tree trunks may indeed be roughly separated, in idea at least, into the four materials—Pith, Wood, Bark, and Cork. I proceed to state the specialities of the four elements of stem, as far as I can make them out.

[1] [In the first (printed) draft (a proof of which has been found among Ruskin's papers) the chapter began thus:—

"I have taken from good old Boston, classic in Puritan memory, a phrase which is with accurate justice applicable to the conversion of a fruitful tree,—whether applicable or not to that of a fruitful Human Soul.

"Every living stem, which continues its growth through successive years, will be found to be composed of four distinct substances: Pith, Wood, Bark, and Cork,—of which the first is, I believe, always white;* the second of many tints, from white, through yellow, red, and brown, to black; the third usually dark brown or grey; and the fourth of the lighter tawny hue which most of us old gentlemen recognize with pleasure, under green, or otherwise gaily distinctive, seals.

"I will endeavour to concentrate into the four following clauses, what the reader should primarily remember concerning these four substances. (1) The Pith . . ."

* In cutting my firewood, I find the central portion mostly browner than the rest, and therefore mark this idea of the colour of pith for questionable.

The reference is to *Human Nature in its Fourfold State . . . in Several Discourses by a Minister of the Gospel in the Church of Scotland* (1720); *i.e.*, Thomas Boston (1677–1732), one of the "Marrow-men."]

2. (I.) PITH.—And, first, respecting the actual diameter and extent of the pith in growing trees, we cannot remain satisfied with the vague statement that the central cord of it does not increase after the first year. If there be any truth in the proportions assigned to Figuier's plane-stem, the pith of the first year is no thicker than a hair; and I cannot conceive a more valuable addition of material to our knowledge of plants, than an accurate estimate of the quantity of pith substance which, whether in rays or central cord,* is necessary to the proper life of a full-grown tree of any given species. Very clearly, there is no perceptible relation of quantity to strength; but we may at least determine, with advantage to our botanical conceptions, the actual relation of pith to bulk in a rush, an elder bush, and a Californian pine; and, at the same time, learn if there be any microscopically discernible difference between the pith of rhubarb, or rush, which has only the life of a year to be the nervous centre of, and the pith of a cedar of Lebanon, which has to nourish and sustain the sensations of a thousand years.

Here I had entered into the discussion of the medicinal and economical qualities of pith, with special notes on the sago palm, of which I find the only sentence that remains is that "all these questions stand in need of accurate answer."[1] So that it may be quite as well now that I

* At page 128, Figuier casually makes the important statement that medullary rays may be formed in the course of the tree's growth, unconnected with the central pith—"sans être en relation avec la moelle."

[1] [The proof of the chapter contains no special "notes on the sago palm," but continues (from the passage given on p. 499 *n.*) thus:—

"(1.) Pith. The central part of every stem, unless it is decayed or hollow, sending out* as the marrow in the vertebral column of a vertebrate animal, nervous processes into the whole structure.

"These nerves of a tree are more or less in the form of vertical walls or partitions; and they pass through the entire mass of the wood, to the bark outside.

"They are composed of white cells, which appear in the early life of the tree to act in part mechanically and by suction, as sponge—drawing up the large quantity of sap needed for the first structure: but in this state they seem also the origin of the growing impulse, by which they are themselves

* Perhaps the radiate rays are sent in to it, not out of it.

cannot ask them, and am obliged to go on to what I had said about the second of stem constituents, the Wood.

8. (II.) Wood.—Namely, that besides the distinction of annual rings visible in it, there is another much wider and more curiously formed distinction between new wood and old—separating the *workable* part of the timber, not into many rings or gradations, but into two masses only; of which the inner is called by workmen the *heart* of the wood, and is the only part used for important carpenter's work; and the outer, called by the English workman sap-wood, and by the French "aubier," is separated from the well-knitted timber, in trees of long life and strong make, by a sharp line, and often a conspicuous difference in colour. "In the ebony, the heart of the wood is of an intense black, while the aubier is white; in the Judea-tree the heart is yellow and the aubier white; in the Phillyrea, red, while the aubier is white in all three." (White always,

increased as the young shoot increases: building cell above cell, like a long honeycomb constructing itself without any bees.

"(2.) The Wood. The essential substance of a Tree as distinguished from an annual plant; being a confirmed and well-knit state of the vegetable matter which the leaves secrete from the air. Carbon, namely, with the elements of water, oxygen, and hydrogen: both united with the carbon as distinct elements, and not as moisture only. Wood is mainly composed of solid fibres. The direction of these constitutes the "grain," and their annual succession forms the rings of timber. But I have yet found no sufficient account of their beautiful variegations. With these solid fibres are intermingled irregularly permeable vessels, by which the wood absorbs water or other elements.

"(3.) The Bark . . . (as in the text, § 13).

"(4.) The Cork. It may seem at first unreasonable to attach so much importance to this usually latent part of the tree, as to place it in the fourth angle of its fourfold state. But although we only know it in full development on a single species of tree, I find that it is a constant member of the external guarding armour of all. It is also an entirely distinct substance in its form; for while all the other constituent substances of the stem are described to us as consisting either of cells variable in shape, or of vessels holding no definite shape at all, the cells of cork are cubic; and are the more remarkable in being so, because one would have thought the cube exactly the least convenient form of cell to be given to an elastic substance.

"I find nothing said by my botanical masters about the uses of cork in vegetable economy—of these I will farther consider presently—but it is a substance which, in its uses to ourselves, should be reverently remembered with tannin, hemp, and cotton, as the fourth of the vegetable elements distinct from wood, most important in practical economy. It is difficult to imagine at first how much the use of wood and glass for vessels of contents, and of hemp in fishing, would be impeded or prevented, if this singular

then? Why don't you say so, if so? or tell us of a coloured aubier, if to be found?) "Workmen who work wood know the difference well; and that only the heart of the wood should be used for works in wood."

4. But on this point the reader will be grateful to me for translating the admirable account given us of old carpentry, by M. Viollet-le-Duc, collected from under the heads "Bois," "Charpente," and "Menuiserie," in his noble dictionary of Architecture.[1]

"It was above all in the provinces north of the Loire that wood was used with perfect knowledge of its precious qualities. If to-day we possess works full of knowing ('savantes') observations upon wood,—if we know perfectly its specific gravity, hardness, degrees of resistance, modes of culture, yet in practice we pay no regard to these researches; we discourse upon the different kinds of wood à merveille, but employ them too often in defiance of their qualities, and as if we knew nothing of their nature. Unhappily, in our days, the practician scorns scientific observation, and the savant is no practician. The savant works in his cabinet, and never goes down to the

---

fourth supporter of the state of stems did not furnish us with the float for the net, the bung for the cask, and the cork for the bottle.

"2. These four names, then, are to be remembered both in English and Latin, as the constant and essential parts of a tree-stem.

| | |
|---|---|
| Pith. | Medulla. |
| Wood. | Lignum. |
| Bark. | Liber. |
| Cork. | Suber. |

And in the rest of this chapter I will endeavour to generalise what little I can farther discover, or perceive, respecting the modes of their connection. One general negative character may be first, I suppose, pronounced concerning them all.

"None of them, in their pure generic state, are nourishing as food to animals. I have heard of bread being made of sawdust: and some conditions of tender branches are of course good for food to the larger beasts, who eat them with their leaves as we do bones in sprats; but I suppose that one of the principal distinctions between the tissue of grass or living leaves, and the substance of wood, is the incapability of this last of being transmuted into other organic substances. More distinctly still, I imagine this to be the case with bark and cork, and the substance usually described as the pith of the Sago palm is, I suppose, rather secreted by the real pith and separated from it by maceration, than an exceptional constituent of pith itself. But all these questions stand in need of accurate answer, with due limitation and exception; meantime I proceed to state the specialities of the four elements of stem, as far as I can make them out."

The greater part of the rest of the chapter, as originally printed, was rewritten and embodied in the text above. A terminal passage, not so embodied, is added below, p. 511 *n.*]

[1] [*Dictionnaire Raisonné de l'Architecture Française*, 1859. The first passage is from vol. ii. pp. 213–215.]

wood-yard;* the man of practice does not observe, he seeks to produce quickly and cheap. The bad habits introduced by love of lucre, ignorance, and routine follow their course, while the scientific observer composes books, and establishes formulas.

"The middle age, which for many people, not, it is true, practical ones, is still an epoch of ignorance and darkness, has not, as far as we know, left any written treatises on the nature of woods, or on the best means of employing them in construction; that epoch has done better than that: it has known how to use those methods in its work; it has known how to raise pieces of carpentry of which the preservation is still perfect, while our woods, employed scarcely twenty or thirty years ago, are already rotten.

"It has been pretended that many of the constructions of the Middle Ages were of chestnut. We are compelled to confess that no roof we have examined presents the tissue of that wood. All the roofs we have examined —those of the cathedrals of Chartres and Paris, of St. Georges de Bocherville, of the Bishop's palace of Auxerre, of the church of St. Denis, which dates from the thirteenth century, of the cathedrals of Rheims and Amiens, of the church of St. Martin des Champs, the hospital of Tonnerre, and so many others that it would take too long to name, dating from the thirteenth, fourteenth, fifteenth, and sixteenth centuries†—have appeared to be of oak, and bear no resemblance to the chestnut wood that we possess to-day in our forests. But it must be said that the oak-wood then employed was of another essence than that generally‡ admitted in modern constructions.

"The particular characters of these ancient woods are the following: Equality of diameter from one end to the other of the pieces; little aubier, porous and silky tissue, fibres straight, almost total absence of knots and rents, rigidity, equality of colour in the heart and at the surface, rings fine and equal, and lightness, probably depending on their great dryness. It is certain that we possessed still in the Middle Ages, and down to the seventeenth century, in our forests, a kind ('essence') of oaks perfectly straight, equal in diameter up to the higher branches, and very high, though of no great diameter. These oaks, which seem grown ('poussés') to make charpentes§ with, had no need of being sawn to make the main roof-timbers; one was contented to square them carefully; not being divided, and the heart thus not exposed, they were less subject to split or twist, and preserved their natural strength. These woods, it is easy to know by their number of rings, are not old: they number usually sixty, eighty, or at most a hundred years, for pieces of stout squaring. The side timbers ('chevrons portant ferme') are of single shoots ('bois de brin') unsawn; and though scarcely counting sixty years, attain often twelve or fifteen yards in length, on a square of twenty inches. Evidently our forests produce no more of these woods.

"The carpenters of the Middle Ages seem to have feared employing, even in their greatest works, very old wood; if they had need of a great piece,

* "Chantier": Latin Canterium, corner; enclosed place for working—chiefly wood, I think,—or storing it.

† "The old roof of Chartres was burnt in 1836; that of St. Denis is demolished, but numerous fragments of it exist."

‡ "Généralement" is a more extensive word than "generally." It has nearly the force, here, of "almost without exception."

§ Any large framework of straight beams or planks.

they united four shoots ('brins'), which was another means of avoiding the torsion so frequent in single pieces. If they had a great roof to execute, they went to the forest to choose the stems, they barked them before cutting down, they put them in the wood-yard many ('plusieurs') years in advance, in the open air, but under cover, and all squared. The cutting down was done in winter, and while the moon was between given ages* ('pendant la durée d'une certaine lune'). True or false, the belief shows the importance attached to the preliminary operations. The wood when thoroughly dry, after long exposure to the air, or an immersion destined to dissolve and carry off the sap, was put in hand. In placing them the care was redoubled: and since wood cut at the end and placed against masonry absorbs the moisture of the stone, to avoid decay arising from this absorption, they nailed to the extremities of the pieces touching the masonry either a sheet of lead or a little ('planchette coupée de fil')? also they took the greatest care to keep the receiving beams isolated from the stone, in order to let the air circulate freely round the ends of the roof-timbers. One avoided as much as possible joining, both that the wood might not be weakened and the chances of decay be less. Often also the beams received a coat of paint, consisting of ochre dissolved in water with salt or alum: this wash prevents insects, and gives a pretty greyish-yellow tone. The woods employed for planks and panels were never, as in our days, shut up within cements—their interior and exterior surfaces were always visible; and under that condition the duration of wood is illimitable."

5. Thus much I gather from under the article "Bois." That of "Charpente" ought to be translated for all our schools, and every boy and girl made to understand it, and draw the figures of it: to my present purpose it only contributes the general statement that the ancients, or at least the southern nations, built rather with cedar and pine than oak, of which the use seems not to have been thoroughly understood till the twelfth century.[1] But, under the head of "Menuiserie," M. Viollet tells us farther that wood intended for sculpture was also prepared by the action of smoke, till it looked like Florentine bronze; and of the trees intended to be sawn up for planks, that they were allowed to grow from two to three hundred years, when their diameter, deducting the aubier, was from two to three feet.[2]

* This belief in the influence of the moon on wood at the time of its cutting down is still preserved in some of the provinces of central France, to such a point that wood cut at a favourable time of moon brings a higher price than the rest.

[1] [Vol. iii. p. 3.]
[2] [Vol. vi. p. 346 and *n.*]

6. Yes, but how much aubier has to be deducted? I have never enough thought of this separation of the wood into two distinct parts, for no assigned or assignable reason that hitherto I can find or fancy; and on consulting my gardener, he gives me an entirely new idea also about the sap: he says—(perhaps the botanists say it too, but I haven't understood them)—that the sap *rises* either in the pith or the inner layers of wood, and descends in the sap-wood (aubier)—forming, he believes, a thin ring of wood in the inside, as well as the annual one on the outside of the trunk. This inner ring I doubt—but the ascent of the sap through the pith seems to be assumed in several passages to which I now refer in my books; and the sap-wood may be, I suppose, just the thickness of wood necessary to convey the quantity of sap secreted down from the leaves—the whole of the trunk, that is, in saplings;—in a trunk with twenty rings which I have just cut I find on a total diameter of 5¼ inches about an inch of sap-wood all round—and the proportion of the sap-wood to the heart diminishes (I hear) as the tree grows older, good old oaks, like good old men, being nearly all heart. If I am right in considering the sap-wood as the space needed for the sap down-current, the sharp distinction between the two parts of the stem is as natural as between the quiet sea and Gulf-stream.

7. If we allow, then, seven or eight inches of aubier to the three feet diameter of the heart in the French oaks grown for beams, we have an average twelve-foot girth, by fifty to seventy before branching.* The larger and shorter

* English oaks are chiefly notable for the acreage of their branches and girth of their necessarily then short trunks; but I find in Loudon's *Arboretum*, vol. iii., p. 1777, that "the Duke's Walking-stick" in Welbeck Park was higher than the roof of Westminster Abbey; and that the long oaken table in Dudley Castle, a single plank cut out of the trunk of an oak growing in the neighbourhood, measured considerably longer than the bridge that crosses the lake in the Regent's Park. The Worksop Spread-oak was in extent nearly thirty feet longer, and almost four times the width, of Guildhall.

trunks, which gave four feet or more of heart-wood, were sawn into planks with a care and scrupulous economy of their strength, of which I suppose few sawyers' yards would now afford example, or even tradition. M. Viollet gives

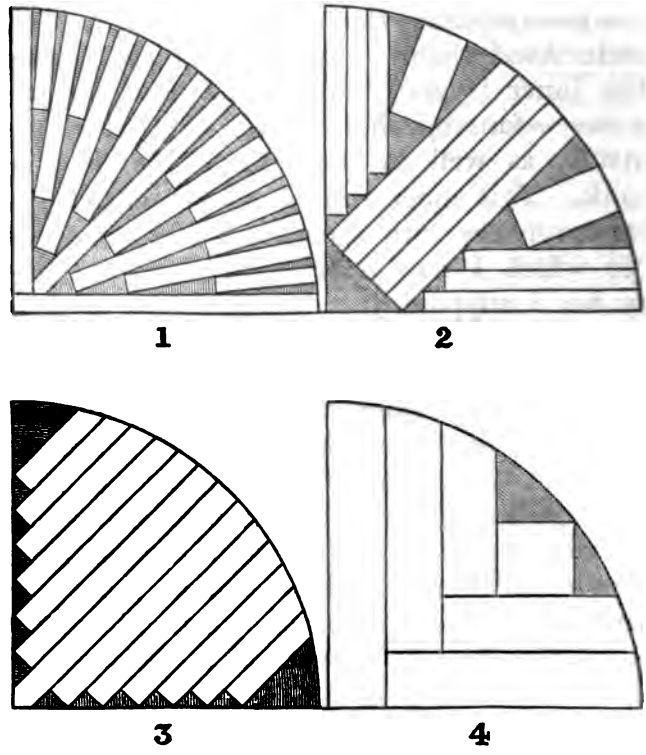



Fig. 33

the four methods of division then in practice in his wood-cut at page 346, vol. vi., but with some confusion to the reader's mind, by giving them in the four quarters of a single trunk. In Fig. 33, otherwise a copy of M. Viollet's, I have placed the methods in succession, 1 being the best, 2 the next best, 3 the easiest and worst; 4, that necessarily adapted for thicker planks. The waste wood, shown by the tinted spaces, was of course used for wedges, props, and for other minor purposes.

8. The reader will find both in *Modern Painters*, and the casual references to French landscape in my other books, various notices of the grace of upward growth in French trees;[1] but I knew nothing of their value for timber in consequence. Curiously, I find as I finish this chapter, in Evelyn's description of Cassiobury, Diary, vol. iii., p. 24,[2] this note on the tallness of timber encouraged by the soil, though restrained by cold. "The land about is exceedingly addicted to wood, but the coldness of the place hinders the growth. Black cherry trees prosper even to considerable timber, some being eighty feet long. They make also very handsome avenues." We have some wild cherry trees here on the first rise of hillside west of the Waterhead of full that height, though branched all the way up.

9. And now, if the reader will look back to what I wrote in the first volume, twelve years ago, at pages 310, 329, and 331, of the imperishableness, and the various uses, of the substance which in a state between death and its decay abides through the coming and passing away of our many generations, he will, I think, accept with better trust and sympathy what I have always taught respecting the preparation of material for the arts of men, by the laws of nature, not accidentally, but with visibly providential ordinance. During those twelve intervening years this idea of any Providence for anything has been warred against as if it were a dangerous and painful error; nor have I time or patience to say anything here in its defence. But I must allow myself room for a word or two respecting the confusion which recent chemistry and philosophy are throwing upon the general functions of animal and vegetable life.

10. An extremely learned and able pamphlet was sent me only the other day, on the question, "What is a plant?"[3] The author examined in detail every sort of plant that

[1] [See *Modern Painters*, vol. i. (Vol. III. pp. 237–238 and *n.*) and vol. iii. (Vol. V. p. 237 and *n.*). See also Vol. VIII. p. xxx.]

[2] [Diary for April 18, 1680.]

[3] [Apparently by Mr. Worsley-Benison (see p. 508 *n.*), but the pamphlet does not seem to have been published.]

looked or behaved like an animal, and every sort of animal that looked or behaved like a plant. He gave descriptions of walking trees, and rooted beasts; of flesh-eating flowers, and mud-eating worms; of sensitive leaves, and insensitive persons; and concludes triumphantly, that nobody could say either what a plant was, or what a person was.

Such investigations are extremely amusing, if you have nothing better to do; but for the greater part of mankind frivolous. Broadly thinking, and usefully speaking, an animal is a creature that walks with its legs, sees with its eyes, makes noises with its mouth,* occasionally thinks with its head, and is capable of pleasure and pain. A plant is a creature that is fastened to the ground by its feet, has no brains in its head, and only an imitation of them in its marrow; cannot talk with its mouth, nor see with its eyes; is not proud of being admired, grateful for being tended, nor afraid of being killed. Further, in breathing, animals, as such, change oxygen and carbon into carbonic acid; and plants, as such, carbonic acid into carbon and oxygen.†

11. (III.) THE BARK.—There is one extremely unimportant, yet interesting distinction between the manner of life in animals and plants: that for the most part in growing plants the skin does not stretch, but cracks, and is worn with the necessary rents; while in animals it either is cast periodically, or stretches and modifies itself with their growth.

* The "O mutis quoque piscibus," which seems to spoil the grace of Horace's song to the Muse,[1] fulfils the complete thought that the emergence of kind animal nature out of mere contentious earth is mainly signified by the voice.

† Compare on this head the deeply interesting passage quoted from Figuier, in the note at page 385, vol. i. The final microscopic word of Mr. Worsley-Benison is that "the green parts of plants in darkness, and parts not green, and Fungi, in either sunshine or darkness, evolve, not oxygen, but carbonic acid, precisely as animals do." Be it so;—then a fungus is a sort of scientific animal; and a green plant is a creature that breathes in the light, and redeems the air for us to its purity.

[1] [*Odes*, iv. 3, 19.]

12. In the tenth chapter of the first volume—though, as the note says at page 335, it was written to introduce farther inquiry in another place—I find put down all that I now care to say on this matter, my business lying henceforward more with men than trees; but the reader will do well to read the fifth and sixth paragraphs very carefully; following out for himself the thoughts connected with the *total* absence of *pattern* in minerals, the nearly total absence of it in tree stems, the beginnings of it in fish and serpents, and perfections of it in birds: then let him read the passage on the fragrant substances of plants, and the difference between vital fragrance and decaying stench (Index, p. 559). This following final passage from the half-lost chapter contains all I can get together for him at present.

13. The Bark is the practically edifying part of the tree, as the pith is its animating power. It is separated, at the time of the year when it is active, from the wood, by the layer of nascent cells called cambium, well named from "cambio," "the *exchanging*" layer; through which commercial structure each part of the tree gets just what it wants. *Within* this layer, the *crude* sap *rises* in the wood; outside of this layer, the *ripe* sap *descends* in the bark: and in the layer itself, the cells are formed which are to be joined to the wood on one side and to the bark on the other. In the Bark, which is the down-channel of the ripened sap, that sap deposits in a permanent form the peculiar elements which are medicinal,—chemically, instead of mechanically, necessary to the tree's life, and active, often, on the vital systems of animals also. What is superfluous of these, and capable of being preserved in a dry form, is laid up in this dark-brown store—perfumed cinnamon, strengthening tannin, healing quinine, and the like; knit together in a toughly fibrous web which protects the tree from external violence, and persists in its enduring, for uncounted years, becoming to men the first means of giving useful duration not merely to their dress, but to

their thoughts, and as the earliest and strongest basis of their Scripture, rendering all that is intellectually medicinal in their own lives, available for the lives of their descendants; and giving our English accepted name to the greatest treasure of every living nation—its "Library."[1]

14. The condition of rent and darn,—or, perhaps more accurately, of stretching so as to admit the insertion of new threads,—is, I suppose, variously combined with the rough-and-ready system of the patch to their bark, in trees of fine temper; but Figuier says, in a piece at page 126, on the "Accroissement des Végétaux," that autumn wood differs from spring wood by being more and more fibrous, and less and less traversed by vessels. This is to explain how it is we can always distinguish annual rings of wood; but, with the miraculous obtuseness of the modern scientific mind, it never occurs to him to tell us why there are not rings of bark also, nor how the cork, which was before stated to be essential, is distributed at all! for if the cork must always be thrown outside of the bark, as stated at page 58, how is the new cork got through the old bark? The section of the tige-d'érable, twice given (pages 58 and 127), is a mere mass of hopeless confusion; and the entire question of the visible bark structure left untouched, under a heap of, to us, utterly useless wreck of microscopic analysis.

15. One or two fibres of information only I can rake out, chiffonnier fashion, and stitch together in my own mind, toughening them with so much tannin as I find there already: namely, that bark is always to be distinguished from cork, botanically, by its polyhedric instead of cubic cells; and that the cork, in most trees, "ne prend que très peu de développement," but that in the cork tree itself (when five years old), "nouvelles cellules apparaissent à la face *in*terne de la zone primitive, et repoussent au dehors celles qui ont été précédemment formées," that other

[1] [For "liber," meaning bark, see above, p. 493.]

beds, shorter, darker, and thin like the blade of a knife, divide these successive additions, and that it must be cut off while it is young, "avant qu'elle durcisse et se gerce" —because otherwise "elle se crevasserait si profondément" that it would be unfit for the uses to which cork is destined.[1]

16. Yes,—and how we wine-bibbers and fishers should have managed without cork, I leave the anti-Providence people to explain:—of what use it is to the trees themselves, we are told by nobody. Happily, most of them wear it thin—and need not crevasse themselves to grow fat, or tear themselves to grow long; and though some sulky ones—for instance, the yew, holly, and hawthorn—accumulate, as they grow old, rugged mountains of stubborn stem, out of all proportion to the height or bulk of their foliage; others, like the poplar and willow, scarcely thickening after a while their tall or pollard stems, throw out the grace and gift of their abundant branches with a springing as of grass from the field; and finally, the true climbers, or wanderers, like the liana and rose, can cast anywhere any length of stem they please, or need, with no necessary proportion at all to the thickness of the dry

[1] [The chapter, as originally put into type, continued as follows:—

"'It would crevasse itself so deeply.' But observe, this is a quite different kind of crevasse from the valleys in the Scotch fir's bark. They are valleys between hills which are always being raised higher and higher from below, their tops remaining just as wide as ever they were; but annual earthquake or bark-quake opening a new crevice in the bottom of each valley, and pushing the mountain ridges farther apart. But the cork-crevasse is the same kind of thing as the fissures in drying clay.

"Get, at least, this distinction in idea well into your mind: for aught I know, or Figuier says, the bark may contract, besides opening; and the cork open, besides contracting. But until we really know more about it, thus much it is easy to see and therefore safe to say: that the cork grows more or less in the manner of a fungus, and breaks like one, and has nothing in the pores of it, and is altogether like—botanists' brains; but the bark grows in the manner of a miraculously woven coat, with warp-fibre down, woof-fibre round, strange powers of expedient rending and beautiful mending, and beautiful medicine in all the pores of it. Whereof, and of the fibres and veins that minister the same, we had better consider the relations to animal life as a quite separate subject, in a presently following chapter."

The "presently following chapter" has not been found among Ruskin's papers.]

wood by which they communicate with the ground: while in the centre of this complex system of growth, we have an entirely anomalous plant, beloved of all civilized nations, and, in the purpose of it, the most deliberately decorative in the vegetable world—the ivy, which has all the action of a *ground* creeper, in the mode of its attachment, yet is essentially a climber on upright surfaces, and *nourished* wholly by its fantastically inwoven and accumulated vertical stem.

# CHAPTER IX

## SALVIA SILVARUM

1. I HAVE hitherto written both this book, and *Deucalion*, far too much in apparent play, and as things came into my head; thinking that their real seriousness would be felt in time. But I must try now in all earnestness to get on, and print what pieces of the scattered work of the last twenty years may be useful, and write what more I can, at shortest, to fasten them together and show the value of the entire mode of treatment in classification by changed names; a most important use of what people call my mastership in language,[1]—if they knew it!

2. Of the arrangements hitherto given, that of the Vestals, on coming to detail, proves the least satisfactory;* —by no contrivance can I get their multitudinous families grouped under those five heads, so the scholar is only to learn them as an introductory group, and add the others as he is able.

Of which five orders note shortly these points.

My word for the whole group, "Vestal," means a plant of the fireside, that one can make tea, and medicine, and sweet scent with. I put mint first, because it marks that they are all small plants, and apt to be despised: "Mint

* This second paragraph, with portions of the rest of the chapter, were written under the idea that Chapter V. had been lost, and certain repetitions which I must ask the reader to pardon, as they are inextricable from the added text.[2]

[1] [Compare the Preface to *Love's Meinie*, above, p. 14.]

[2] [The present chapter—written, it thus appears, before the publication of Chapter V.—deals, like it, with plants belonging to Ruskin's order "Vestales." For the previous arrangement of "Vestales," see pp. 353, 355.]

(ἡδύοσμον, anything of sweet scent) and anise and cummin;"[1] then, Melitta, to include the now absurdly separated melissa and melittis,[2] and all the flowers of this family that are rich in honey and straight in stalk; then Basil (Balm), including, with Lavandula, all the sweetest scented kinds; then Salvia, including the tallest and most brilliantly coloured kinds; and Thymus, the most precious and lovely of the creeping ones. Under these I thought I could group nearly all familiar forms,—and in a rough way I can, most; but have to ask afterwards the reader's patience in learning a few more. For easy talk of the whole family, if people don't like my word Vestal, it is certainly more simple to call them all "mints" than "labiates," and accordingly Plate XXVIII., which gives characteristic types of blossom, is titled Menthæ, not Vestales.

3. The said plate is far from satisfactory to me, for the front views of the flowers should have been exactly the heights of the profiles; but one or other got the bigger in correction of contour, and the surface-shadow cost too much trouble, and is a failure; but there is enough done to show what I want.

All the three flowers are enlarged, and the upper one three times, being drawn two inches and a half long, when it is scarcely three-quarters of an inch. The flower itself is pure white with violet veins traced in delicate embroidery on the lower petal. I can find no figure of it in Sowerby, but it grows in the manner of his "Galeopsis ochroleuca" (S. 1076), I think with never more than two blossoms at the top of the stem. I shall call it "Salvia Alba."

4. The dark blossom, central in the plate, is that of the common purple "dead nettle," so called—a mischievous shame, since it has nothing whatever to do with nettles dead or living; but is an entirely innocent and pleasant flower, the white variety of it so full of honey, that children as well as bees, enjoy it: whence Proserpina's name for it.

[1] [Matthew xxiii. 23. Compare Vol. XI. p. 117.]

[2] [Melissa officinalis, common balm; melittis, bastard-balm. The former is placed in the Tribe "Satureineæ"; the latter, in the Tribe "Stachydeæ."]

"Melitta dulcissima"; called "Archangel" in old English—by some corruption of Latin, I fancy,* but my wisely fanciful botanical friend writes: "The blossoms do seem to stand in solemn order like Blake's angels in the Book of Job."[1] The purple variety is very pretty when well grown, but the plant is rarely seen in any perfection, the fate appointed for it being to grow where it can, in neglected ground and on roadside banks. We have a beautiful form of it at Coniston, with a bright white streak down the centre of the green leaves, forming white crosses all up the stalk.

5. The third figure at the bottom of the plate is the enlarged blossom of thyme, but giving the under view of the flower on the right, instead of the front view, in the two upper figures. But the plate enough shows the general character of all Vestal flowers, that they push themselves obliquely from their stalks, out of a spiky brown or red calyx, and open into a grotesque group of petals, which may, I think, be most conveniently called by children the hood, the apron, and the side pockets—the whole blossom being something like a dress provided at a fairy almshouse for slightly hump-backed old fairies, fond of gossip. I hope to get some pretty studies of the growth of thyme this year—the getting of them longed for this many a year always in vain. Meantime here are some notes on one of the completest and commonest types of the whole family, "Salvia Silvarum," which will render account enough of their total structure; and I can gather a stalk of it this moment in my own silva.

* Archangel (?) from being in blossom on the Archangel St. Michael's Day, May 8th, O.S.

Red archangel, Stachys sylvatica.
White „ Lamium album.
Yellow „ „ galeobdolon.

Archangelica "ab eximiis ejus viribus."[2]
Also "angelica archangelica," an umbellifer.—F.

[1] [For other references to Blake's designs for the Book of Job, see Vol. XV. p. 223, and Vol. XXII. p. 470.]

[2] [This seems the more probable explanation of the name; for, says Turner's *Herbal* (1551), ii. 7, "the iuice of rede archangell scatters away cancres."]

6. A stout stalk it is, for having dug some boggy ground well over by a little stream last year, and then left it,—by help of the black and wet autumn it has produced me such a crop of burdocks, thistles, wild grass, and weed tangle in general, as I never saw matched yet for manifold vigour of uselessness; and among the tallest of the weeds, a cluster of this dark purple Betony * has shot up, some five feet high, and branched like pine-trees, each plant having some half-dozen lateral flowering shoots, as long as the whole plant is, in most places.[1]

The usual form and scale of it, however, are those which the student should examine; so with the overgrown and luxurious one, I gather another, younger, or more modest, not more than a foot and a half high, and such as

* Betonica officinalis of Baxter (*British Flowering Plants*), and *Flora Danica*, v. 726, but there not satisfactorily drawn. Stachys sylvatica of Sowerby, translated Hedge Wound-wort (s. 1071), and confusable with Stachys Betonica, which he translates *Wood* Betony (s. 1067). The old name of "Healing Betony" must be learned as well as Proserpina's, seeing that "Antonius Musa, physician to the Emperor Augustus, wrote an entire book on this plant, whence it began to be held in such esteem in Italy as to occasion the proverb 'Vende la tonica e compra la betonica' ('Sell your coat and buy betony'); and when they wished to extol a person, they would say, 'Tu hai piu virtu che non ha la betonica' ('You have more virtues than betony'). Experience, however, does not discover any other virtue in it than that of a mild corroborant. As such, an infusion or light decoction of it may be drank as tea" (*Flora Lond.*).[2]

---

[1] [Professor Oliver, F.R.S., on the appearance of this part of *Proserpina* wrote as follows (Kew, September 1, 1886) to Mr. Allen:—

"As I never trouble Mr. Ruskin now with a letter, I may point out to you, interested as you must be so greatly in *Proserpina*, whose engraver you are, that there is what I should call a grave mistake in the last part in the confusion of *Betony* and *Hedge Wound-wort*. The woodcuts do not represent true Betony, but the common 'Hedge Wound-wort,' which is no doubt the tall plant—5 ft., I think, Mr. Ruskin says—which has grown up in unwonted luxuriance in the bit of ground he had dug out. Baxter's *British Flowering Plants* figure is true *Betony*. *Flora Danica*, tab. 726, vol. v., is also Betony. Same work, vol. vii. tab. 1102, is Hedge Wound-wort (the plant Mr. Ruskin figures). Sowerby 1071 is Hedge Wound-wort. His 1067 is Betony. Betony is a special favourite of mine in northern meadows and on grassy banks, with meadow Cranesbill and Eyebright, which always welcome me on my annual holiday in the northern counties, that one feels it a pity *Proserpina* should have confused it with the Wound-wort, a very common hedge-side and ditch plant, not ill-favoured, but with a very peculiar *heavy*, not agreeable odour."]

[2] [*Flora Londiniensis*, vol. ii., letterpress facing the plate of Betonica Officinalis.]

the reader can find anywhere in waste ground in July and August, and will find to be constructed as follows:—

7. In the first place its stalk is accurately square, and the squareness finished and emphasized by little purple ridges on the angles. And it is tubular inside, thus;—*a*, Fig. 34, natural size near middle of a fine stem; of given quantity of substance you cannot devise a stronger form; and it is heartily tough, moreover, and will sooner come up by the roots than break. If you try, with rather a blunt knife, to make a neat section of it just above a joint, you will remember the character in question without any further effort. It is strange that the botanists never mention as a notability in any species of plants, their toughness or softness of stem! And yet nothing can be more truly vital as a specific character.

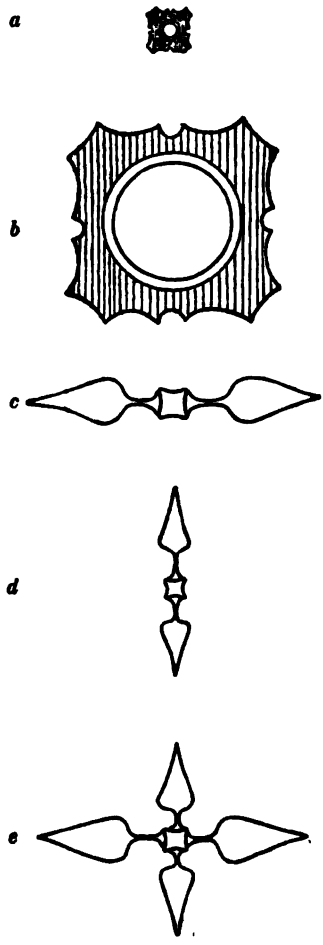


Fig. 34

8. Getting a section with a sharp knife, you will see that the cylindrical hollow tube is surrounded by a white lining, presumably a kind of pith, but as we don't know yet what pith itself is, we are not much the wiser. And the angle-ridges, seen through a lens, we shall find slightly flattened into a kind of fillet moulding, not shown in the enlargement of the section at *b*, as it would have disguised the main plan. The whole stem is hairy, and rough to the touch.

9. From this square stem the leaves spring in pairs, alternately from the two opposite sides. It is quite easy

to fold a piece of paper into a likeness of the square stem and cut out two jagged triangular leaves and paste them on it, a little way up, as at *c*, and then two smaller ones and paste them on a little way above, as at *d*; and then

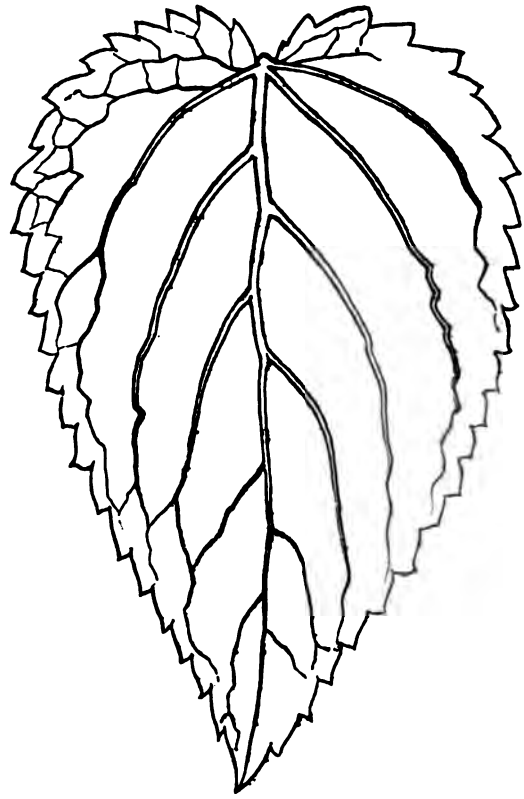


*Fig.* 35

looking down, you will have the crossed group *e*, which in any Vestal plant you will at once perceive to be the normal arrangement of it.

10. I call the leaves "triangular": their actual form, in this plant, is, as in Fig. 35, a long shield or heart shape irregularly and coarsely serrated, ribbed also without any precision so as to give a reticulated surface, of which I

engrave the fine network only at the inner edge, as it would be useless trouble to draw it all over. And if you feel the real leaf, you will find it to the touch exactly like a piece of fine soft flannel. This comfortable and salutary, but rather coarse and unpleasant, character, being pre-eminently what I have called, for general reference, "Salvian."*

11. If the plant be strong and well grown, minor flowering branches grow in the axils of the leaves; but we need not trouble ourselves about these. In ordinary examples, the leaves merely diminish upwards till the clusters of flowers begin, and, under these, taper gradually until they are lost to sight and the flowers are everything. But the little leaves climb on underneath to the last, and terminate the flower cluster with an infinitely diminishing crossleted knot, like a Chinese puzzle.

12. The flowers themselves are of a subdued purple, more like the faded stain of some rich fruit than living colour, and speckled or daubed with white, in front, in a somewhat tigerish and angry-looking pattern; to which if you take a fine lens, it will show that the white is composed of fine silvery short hair, giving a sugary kind of gleam over the purple, the white dust on the stamens above adding to the farinaceous gleaming,—the blossom, for all that, remaining so gloomy and sad-coloured that I had half a mind to call it "Salvia tristis," but "silvarum" will better identify it with the *Wood* Betony of present books.

13. It would be quite impossible to draw and describe the complex form of this flower properly without great pains, and much explanatory and apologetic talk besides, but this rough Fig. 86 will indicate the things to be looked at.

There is first a pale green calyx *a*, fine pointed, and that acutely, as if meaning to grow into thorns; then a purple tube *b*, whose rounded back follows the curve of

* Compare pp. 239, 398, 556.

the springing style within, which shows itself finally outside the flower's mouth, ending in a fork like a viper's tongue. Above this there is a hood *c*, and below it a kind of apron *d*, whose form with the spots on it is better understood in the front view of the flower on the right.

14. Now, the entire tribe of flowers we are examining is first to be thought of as thus constructed of a vase rounded

Fig. 28

above so as to comply with the curved spring of the style (I will return presently to the question of the manner of this compliance), opening, at its mouth upwards, into the hood—here, though small, remarkably well defined—formed by the upper petal; and below into the essentially triple group of petals, on which whatever stains or dashes of grey colour the blossom is to bear will be always laid, and which I call the apron and side pockets. Where these several parts exist clearly, any reader who has some dexterity with the pencil, cannot study the minor divisions of species better than by pulling off this lower part of the flower and

laying it flat on white paper, and then painting, magnified, whatever pattern is put on it. The stains are irregular always, yet in some graceful order peculiar to each species, and I find the ordinary botanical plates of these flowers quite beyond identification for want of them, besides failing to note the central curve of profile, which is the primary distinctive character. This Betony we are examining, though so strongly barred with purple that I thought of calling it "Tigrina," is not, either by Baxter, Sowerby, or in the *Flora Danica*, marked as having spot at all! nor can I conjecture the name, among those now accepted, meant for another pretty kind, lilac and white, and spotted as in Fig. 87 in pretty waves and ribands, but I shall call it myself Salvia Vittata; the full purple kind, in which the apron is not spotted, but divided into two lobes, each again cloven at the edge like the petal of a pink, will be Salvia Fimbriata.

*Fig. 87*

15. In general, fringed flowers are among the most graceful and delicate forms of their families, but among the Vestals, the fringe is apt to take the look of the teeth of a trap. I cancelled the two cuts below (Fig. 88), of the side and front view of a flower of Brunella, magnified five or six times—thinking them unpardonably coarse and ugly; but they show this fanged character in clearness, and are worth retaining, if only to show that things are not meant to be finally studied under magnification.

16. The following note on Melitta Aurea, just written in the pretty lanes of the chalk at Orpington,[1] describes one of the best types of the Vestal Family.

[1] [In May 1885.]

Its hood is of beautiful pale yellow, deadened into a mossy texture by minute white hairs, short all over the surface, but the tenth of an inch long at front edges. Apron small, and pockets, though comparatively large, all very subordinate in comparison to the hood, and looking a little as if they had been shrivelled or withered; being of deeper, *i.e.*, pure full gold-yellow—spotted and barred with rich warm brown, laid on in fine granular texture, darkening to their edges. Style * and four stamens curving under the hood so closely pressed back into it that they look like a striped pattern on the inside, the style being pink, and stamens white, closely embracing it. Anthers edged with brown like a figure of eight opened a little in the middle; stigma merely a little fork like a serpent's tongue. Calyx of one upper, two lateral and two lower closer set sepals. The central ribs of the lateral ones bent down into them; a small sharp green bract at the base outside; the base of the flower bossy and firm, apparently formed by the hood

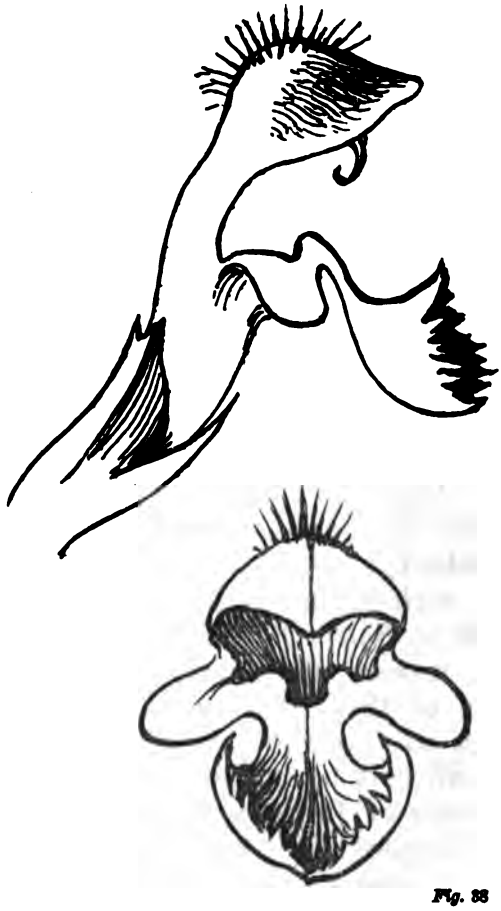


*Fig. 88*

* I do not insist on my new nomenclatures of parts of flowers, except in particular references to them. My first object at present is, to get the new groups and names of families arranged and understood.

only bent down so as to hide and contain all the rest; the fringe of white hairs, already at their full length, and close set, holding it hard down within; the stamens, curled close round, hid within the apron. Eight or ten flowers in a cluster, but the first opening group normally of six—set so as to show three at each side of the cluster, placed across the direction of the growth of the alternate pairs of leaves. Grows a foot or fifteen inches high, with six or seven flower clusters on each stem.

Delicately sweet of taste in its honey—with the merest soupçon of pungency. I think honey made out of fields of it would be nicer than other lowland honey; yet I do not remember ever seeing bees busy at it.

To the reader who objects to my simple name of this plant, the information may be useful which I find in the *Flora Londinensis*,[1] that Linnæus, though he enumerates it with the Galeopsis tribe, seems to think it not perfectly reconcilable with the rest; that Haller considers it a Cardiaca; Scopoli, a Leonurus; and that Mr. Hodson makes a separate genus of it under the name of Galeobdolon. In the same book I find that it "throws up some shoots destitute of blossoms, which, after the flowering is over, are extended to a great length, and afterwards creep on the ground." (Where to, and what for?)

17. The following correction, by my wild Irish friend,[2] of my statement that the Vestals have no brilliant colour, is mingled with other delightful talk from which I cannot extricate it.

"About the Sages.—All the English sages are strictly temperate in colour; but I suppose much sunshine drives them to excess more than other plants, for certainly the exotic sages have no moderation in their hues. Gardening books call Salvia Patens and Salvia Splendens natives of Mexico, and the velvety violent blue of the one, and scarlet of the other, seem to have no gradation, and no shade.

"There's no colour that gives me such an idea of violence—a sort of rough, angry scream—as that shade of blue, ungradated. In the gentian

[1] [*Flora Londiniensis*, vol. ii., letterpress facing the plate of Galeobdolon Galeopsis (Yellow Archangel).]

[2] [Mrs. La Touche, with whom at this time Ruskin had much correspondence on botanical subjects.]

it is touched with green, in the cornflower with red, and softened by the light playing through nearly transparent petals, but in the salvia it is simply blue cloth.* I remember a garden party I was at once, in a very pretty shady place among large trees, where the whole scene was made ugly and put out of tune by one good-sized lady, dressed from head to foot in silk of that shade. No one wears it now.

"There are a great many different salvias, but I don't think there are any of mixed or uncertain colours (I mean garden salvias), and therefore I don't think they are changed or changeable by cultivation. If they were, they would long ago have appeared in seedsmen's lists as 'Florists' Flowers': there would be new varieties every year, with such sweet flower-like names as John Hopper, Thomas Granger, and Pilrig Park (a rose, and two pansies). I think all the gaudy sages of our gardens are just the same as the parent plants or seedlings, from the tropics. I find that a brilliant blue sage is a meadow plant in Germany.†

"There is a rather excessive tendency to colour in the sage family;—those Coleus things in our greenhouses with painted leaves are sages, I think—or are they glorified nettles? Their flowers are light blue. Coleus is quite an artificial greenhouse person, as far as I know it, splendidly coloured as to its leaves, the varieties endless and indistinct. The little white streaks on the leaves of your wood betony show what I think is a tendency in all the mints, to decorate their leaves—smart petticoats to compensate for hooded heads; flannel will take very gay designs. Some of the coleus varieties have puckered and frilled leaves. I would send you a blossom or sketch, but it is not in flower yet. I never saw the flowers vary; the shoots end with a tall, loosish, and *not* leafy spike of very small pale blue hoodies. However gaudy the leaves, the blossoms seem determined to assert with great pride their conspicuous humility.

"I have just been given a plant of the tall yellow wood-sage, from the Apennines,—the plant you told me of. I had one last year, and it flowered, but found my playground too cold, and died. I will keep this one indoors.

"I've been all morning weeding out minx plants. It's curious how some wild flowers are essentially weeds, and others are not,—just as some minxes are always getting in the way and putting in their word when their betters are in conclave. I have several little round beds, about a yard across, planted with rock-roses, and meant to look like cushions, pink, white, and yellow. Well, I took a whole basket of minx plants out of those little beds. Some of them, notably the plantains, were so anxious to be seen above the rock-roses that they stood on tiptoe, their roots nearly out of the earth. I had brought a trowel, knowing the tenacity of plantain roots, but the conceit of these creatures had left them almost rootless, and a finger and thumb dislodged them. Several of the smaller pale-eyed veronicas had spread long shoots all over the ground, standing up at the tips,—and there's an ugly thing called Fat-hen, a chenopodium, that springs up everywhere, except in wild places where no one would

* My own feeling is against the clothiness only, not the colour—though I admit the after-mentioned lady might more advisedly have been dressed in what the French call a "bleu discret."

† And in Switzerland; but nobody cares for it.

object to it. Some plants really seem to have no other business than to thwart and provoke cultivators. The docks, which are such an aggravation to the master,[1] come in crowds when he sows his turnips, and drive down long, straight roots, that can't be dug up.

"*June* 1*st*.—Bugle is just beginning to blow by the river here, and the leaves that grow high among the flowers are of a bluish bronze. It is all very pretty in colour; like Brunella sent to school, and well fed, and taught, and dressed, and made a duchess of. It has a mouth, but no hood. In flowers, some of the monastic orders seem to do without hoods, or gradually cut them down into shawls. Here's a rough sketch of a greenhouse salvia, Fig. 39, certainly not varied by cultivation, and it has no hood. As soon as the bud opens, the style and two stamens shoot out seven-eighths of an inch beyond the petals, and the thing that should be a hood is not only strained back, but pinched in at the sides till it is exactly like the keel of a pea-flower. So the fashion of hoods seems to vary a good deal, and some orders must want to leave them off altogether. As I was going to church yesterday, I picked such a beautiful spire of the white Melitta dulcissima. It was quite striking to have such a new view of it, for I had to look up at it,—it was growing from a cleft in the coping stones of a high old wall. There were two ranks or circles of fully robed and hooded 'Archangels,' one above the other, ten in one circle, and the whole as straight and stately as an obelisk. 'Well, so you come to church with a nettle stuck in your gown,' said a fellow-worshipper.

*Fig.* 39

"I have no experience of minx flowers. There's no dodder here; and our wood-sorrel does not burrow. There is so little of it, that it likes to show itself. And all our flowers here are serious-minded, though sometimes very provoking; some of the veronicas particularly, always forcing themselves among their betters, and spreading themselves out. They are perhaps a little minxy, with their foolish pale-blue eyes. I don't mean the speedwell; she has no such habits. You scarcely ever find them far from a house. And there's a plantain ('way-bread') that can't live without a road to sit beside and see the people go by. Yesterday, I found lots of groundsel in a gravel pit, in the middle of a large pasture far from any house. But there had been battles there and remains of earthworks, and they never take the gravel without finding human bones. I stirred the earth about the groundsel, and came to two human vertebræ, and some ribs and a shoulder-blade. So the groundsel belonged to humanity still.

"Why do some plants follow and haunt man and his habitations, as if they did it on purpose, or had no place of their own in nature? It would be as strange to meet a plant of groundsel or shepherd's purse in a lonely wood or moor, as it would be to meet a London policeman,—and yet groundsel has flying seeds and can grow in all soils, where it isn't wanted."[2]

[1] [Mr. La Touche.]

[2] [Here, in the original edition, followed the concluding passage, now transferred to p. 535.]

## CHAPTER X

### OF CAPRICE IN FLOWERS

1. I SAID that I would[1] gather into this chapter all I could, of what seemed to me traceable in the caprice, or personal character, of plants, as distinguished from their enforced structure;—the measure in which they grow, and are not grown; in which they spring by their own force out of the ground, and are not pulled out of it by the external force of the air,—in which they twist because they like twisting, and are not wrung round by the sun, nor forced to clasp other trees lest they should fall, or climb them as bears climb a pole, to look out at the top. But I find the chapter would be indeed a far climbing one—a very Jack's beanstalk of a chapter, if I tried to give any completeness to its statement. I can only set—if it may be—a vine-stick for the reader's own clustering thoughts to climb.*

2. And in the first place, note that the characters of plants are of course to be studied only in comparison with those that grow virtually under the same conditions. This district of the western meres of England, in its mildness, dampness, ruggedness of soil, and twilight length of summer day, is especially favourable to all surface-growth,—growth which, in a certain sense, is parasitical,—of one plant upon another; but not injuriously so,—the stronger plant being only covered as a rock would be, by the more swiftly growing kinds which adorn it without injuring.

3. And here we must at once distinguish between what

* Borrowed from Mr. Browning. I was asking him one day some clue to an eager friend's character. "She is a true woman," he said; "put a stick for her in anywhere, and she'll run up it."

[1] [See above, p. 485 n.]

is properly called a parasite,—*i.e.*, a plant or animal which lives at the expense or to the injury of another (as, for instance, the fine society of the town at present lives at the expense of the peasantry),—and what botanists, I believe, call an "epiphyte," a plant that grows upon others without feeding upon them. But one broader and more important distinction must be made simply between innocent and malignant overgrowth, of whatsoever kind. A honeysuckle does not grow upon other trees, but it strangles them; while the polypody and the whortleberry will root themselves half-way up their trunks, yet not do them the least harm. "In Cornwall I have seen polypody fully twenty or even thirty feet, up high trees," says a trustworthy friend.

In calling this district, then, favourable to surface-growth, or overgrowth, I mean that it shows in utmost beauty most of the plants which not only can grow without direct nourishment from the earth, but delight in the difficulty, and seem never to be happy unless hard put to it for a living.

4. I have just named the polypody. It enjoys itself extremely on the top of my garden wall, but would not be the least obliged to me for putting it into a flower border. The veronicas and snapdragons are partly of the same mind, and I believe my gardener, albeit wise, does not quite know how greatly he might gratify some of his pinks by letting them droop out of a cleft of crag, instead of fattening and propping them in garden luxury, till they split their corsets, and lose all grace and retenue.

5. But the most curious, though the most subtle, personal character in overgrowth is shown by the wood-sorrel.[1] It will carpet the ground freely enough, and you might take it at first to be as simple-minded as a wood anemone or primrose. But it differs from all other gracious flowers known to me in having an especial liking for *holes*. It is like a mouse, or a marmot, in real disposition: it does not seek crannies for shade, as many other pensive flowers do; on the contrary, full, though not bright, light

[1] [The *Oxalis acetosella*: see Ruskin's study, Plate II., p. xxxviii.]

is necessary to it: but it loves a burrow—for the burrow's sake, and will always get down into one as far as it can without loss of daylight.

6. The following piece of letter from the banks of Liffey[1] generalizes too much in theory from the sorrel of the one spot. There is no question about this habit of the oxalis to fill nooks; when it grows on the stump of a tree, it is always between the roots, never on the projections of them.

"About wood-sorrel. There is so very little of it here, that it does not choose to hide itself. I only know one spot where it grows wild, and there it makes bosses and cushions of itself. I have planted it in several places where it has either done the same thing, or died. Don't you think plants have local customs and fashions like people? English wood-sorrel may value comfort and shelter, and the Irish sort may value conspicuousness. Just as English people always want to eat, and won't go twenty miles without either a certainty of luncheon at the end, or far too much of it in a basket; while *we* never think about it at all, and never miss it when it doesn't come of itself. I'm sure your wood-sorrel just wants to be warm and comfortable, and ours doesn't care.

"I don't think I have found out any more 'minx' plants. Our woods are now carpeted with the shiny leaves of the wood sanicle—a provoking thing, because it is not an anemone, and in spring its young leaves are so like anemone leaves, that strangers always say, 'What quantities of wind-flowers you have!' and one has the mortification of confessing they are only imitation!"

7. The following notes on the sorrel were intended to have been carried into deeper crannies,—I see they have been by me these nine years,[2]—and must be given now, as they were left.

*May*, 1878.

Here, round Coniston, the oxalis, primrose, wood hyacinth, violet, and wood anemone, reign together in the perfect spring. This year, I find that in the middle of May the oxalis is entirely past, the primrose and hyacinth fast passing, the wild strawberry succeeding the oxalis in

[1] [Again from Mrs. La Touche, of Harristown House (Co. Kildare), situated at a height above the Liffey.]

[2] [Here the printed proof adds:—

"See farther the notes on uses of round and pointed leafage in the next chapter."

The next chapter was, however, on a different subject; but see below, p. 544.]

[3] [It will thus be seen that Ruskin was writing in 1887.]

perfect beauty; but, along the banks and roadsides, grievously mixed with and effaced by the vulgar white Clarissa, the basest of its order.

I have not had half time this spring to examine the oxalis; but these essential points are to be noted of it.

8. Its entire function is decorative; it is virtually a flowering plant,—not one for either fruit or seed; its fruit is nothing, and the whole aim of Nature in it is to give the flower an infinite tenderness.

Each flower has its own little stalk from the ground, —there is no companionship for it on its own stem—only neighbourhood with other blossoms, each from the ground. Each virgula has only to sustain its own delicate blossom.

Now, that a flower may be perfectly tender in expression, it must be not only capable of affliction, but evidently, in a measure, afflicted; having its form not only alterable, but altered. The strong flowers—strawberry or buttercup, hyacinth or narcissus—have perfect forms of petal and bell, from which, so far as they vary, they are imperfect flowers; but the oxalis is meant to be by kindly warmth expanded into its perfect cinquefoil, and by rain and cold closed into a bell which droops, and shrinks like an abashed maid; nor only so, but the petals themselves are never of any constant form, but, approaching more or less in contour to those of the anemone, divide and fret themselves at their edges, as if they had hesitated at every chillier dawn or falling snowflake of the April mornings, and had faded with every fading violet ray of the April twilight; their own tracings of violet vein being branched more like riven clouds than petal colours,—so irregular are they in their half-effaced empurpling of the white, which yet is pure as snow itself, where it fills the hollows of the dark rocks.

I must give account of the most capricious of all beautiful wild flowers separately.[1]

9. My correspondent's accusation of the deceptive leaves

[1] [The Cyclamen, the subject of an intended chapter: see the notes for it, below, p. 540.]

of the wood sanicle (Sanicula Europæa, health-giving or curative?) connects itself prettily with what I had said in the close of this chapter, of a less amiable plant.

The lesser dodder gives us a notable example of another kind of caprice, to which I referred in saying elsewhere that species mock each other when they approach, but do not pass into each other.[1]

The lesser dodder is a little campanula which to all appearance has resolved to imitate a heath. Now watch the trick of it. First it makes itself as small as it can—smaller than even the ling—so that it may make its five petals look like four. Then to its own proper and thin film of tissue, it gives the strong and wax-like substance of the finest and strongest heathers; and out of this tissue, sugary under the lens, and so wax-like and strong that the plant is called "wax-weed" in South England, it constructs a petal almost of the boat-like form of a true heath petal, and pushes out its black forked style, so as to give something the look of the dark centre of the heath bell; and succeeds in quite avoiding detection as to whether it has five petals or four. Then it exaggerates the fringe at the root of its stamens, so as to look like that of the ling; then it turns its calyx into a lovely purple secondary bell, and puts a boss of bracts under that, so that, seen laterally, it can now be hardly at all distinguished from a bell of ling. Then, lastly, as it cannot look the least like a heath while it remains visibly a twisted plant, it throws off all its leaves, thins its stalk to a mere brown thread, and takes a stem of furze to climb up, making that look its own, and crowding its bells together between the green whin-leaves, so as to look almost exactly like clusters of ling, throwing its narrow red stalk about meanwhile in all directions, so as to mask and embrown the furze, and disguise all the separation between the two plants, until one fancies it must really be a prickly species of erica.

[1] [*Queen of the Air*, § 62 *n.* (Vol. XIX. p. 358).]

10. Now in all this, observe, there is only mockery of heath—*there is no real approach whatever to a transition* into heath. The five small petals are not one fraction nearer becoming four than they were in the full purple expanse of the convolvulus. The convoluted and parasitic nature, so far from having approached the honest-branched and earth-rooted nature of the erica, is far more intensely convolute and parasitic than in the convolvulus; it has actually *disguised itself by its own exaggeration*, and the fringe at the base of the stamen, stooping inwards, has no real connection whatever with the two branches of the heath stamen, thrown outwards. Everything has been done to deceive, but nothing to effect real transition.

11. Why the powers of nature should try to deceive us, is not our business to ask; nor if the question be put to her will the Sphinx reply; but it is a fact that she does, and that our life, when healthy, is a balanced state between a childish submission to her deceits, and a faithful and reverent investigation of her laws. We are to live happily, like children under a dome of blue glass, with pretty glittering gems in it, that rise and set. And we are also to know, like grown men, and to endure in humility, the sorrowful knowledge, that the dome is immeasurable; and that we, and all our lives, and all our nearest worlds, are the servants and satellites of one vague speck in its luminous infinitude.

## CHAPTER XI

### OF WILDNESS IN FLOWERS

1. THE deeply interesting passages respecting the association of certain flowers with humanity, occurring in my correspondent's additions to last chapter,[1] lead me into some thoughts which are partly sequent on what I have already said in Chap. VII. of the first volume;[2] partly suggested by these passages, and recently gathered information connected with them.

Only yesterday,* my little cousin Lily,[3] riding to the lower end of the lake, in the loveliest summer day I have seen our hills glowing in for perhaps the last three or four years, brought me back, as the best news she could give me to brighten the day, that there were six or seven large clusters of my favourite pansy by the roadside, just where the lake ended.

Now, the gardens,—flower and kitchen alike,—are banked and bedded with all manner of pansies—golden-white, purple, and azure. But the child knew very well that I looked on all these merely as flower upholstery; that the *one* pansy I cared for was Viola Psyche,[4] and that Viola Psyche could not possibly be found but at the end of the lake.

2. Again, this very morning, 11th July, I have the following note from kind Mr. Robinson,[5] of *The Garden*, in

* Date of year needless. My seal-motto of "To-day"[6] seems changed now into one long yesterday.

[1] [See ch. x. § 6.]
[2] [See above, pp. 292 *seq.*]
[3] [Eldest daughter of Mr. and Mrs. Arthur Severn.]
[4] [See above, p. 407.]
[5] [Author of *The English Flower Garden*, first edition 1883, frequently reissued.]
[6] [See the title-pages of this edition, and Vol. I. p. xi.]

answer to an inquiry of mine about the deadness of colour and vapid smoothness of root of petal in the orange lilies which are living with the cactuses in my greenhouse:—

"*July 4th*, 1885.

"DEAR MR. RUSKIN,—There are various lilies allied to the bright orange one of the Piedmontese meadows. To make a fair comparison, you will, of course, be sure that you have the *same* lily both in pots and in the garden. The '*Orange* lily' has a good English name—established for generations among people who never spoke a Latin word. It shows remarkable differences between its garden and wild state,—in the Irish cottage garden, when well grown, branching into a great head of flowers; and in the Alpine meadows (as I saw it in Anzasca), with one noble blossom level with the grass and St. Bruno's lilies.

"Please give us *English* names. 'Lilium Fervidum' is just as much of a bar to the 'fairest gate to knowledge' as any other *botanical* name; and of these names we have surely had a sufficient supply in the past, and have a rich promise for the future! I have been through every stage of the plant name question, and cannot describe the vast loss to all who love gardens and flowers caused by the use of the *Latin* * nomenclature. It is not only poor and simple people who are bothered by the long names; educated people in the 'higher classes' are also knocked over by them! *The Garden* founded by me reaches most of the great gardeners, and my *Gardening* goes among the more simple people, and so I have had opportunities of judging of this question that were not before available; I also spent several years in a botanic garden—quite pleased at my mouth being full of barbarous language!

"Please do not trouble to write in reply to this, but if I can help you in any way, put your question in one of these tough envelopes, and it will come direct to me, and be promptly attended to.

"Believe me, dear Mr. Ruskin,
"Yours very faithfully,
"W. ROBINSON.

"*P.S.*—Two wild forms of the Orange Lily have just been sent to me, both showing the furrowed surface. They are growing in the open air in a garden. Evidently these are distinct forms of this lily, which is closely allied to Umbelliferum. I have good reason to believe that lilies—certainly the white lily, and the golden-rayed lily (Auratum)—lose their strength of rib or nerve, and therefore their force of colour, when grown in heat."

8. I am most grateful to Mr. Robinson for his admission of the need of simple nomenclature, and most earnestly I will try to recover, or invent, English names for England, and French for France. But the Latin name is always

* Bad or good, it is equally impossible for the English people of the world.

necessary for scientific European service. The beautiful flower now under debate does not grow wild in England at all, and while content with the simple term "orange lily" for the variety grown in our gardens, I keep Fervidum, in Latin, while in English, Flame-Lily, will be the most easily accurate expression for the noble flower: and in French Lis Ardent.

4. I found it, on 2nd June, 1877, growing in richest clusters, together with the white asphodel, in the hollows of the smooth gneiss rocks of the entrance to the Val Formazza: the rocks dark with a bronze-coloured lichen, like the half purple, half brown fur of an animal, the purer purple shadows of the distant valley withdrawn beyond their rounded glow; and the fiery flowers set against such mighty shade. They themselves in supremest strength—four and five lilies clustered at the top from a single stem.

The quantity of device and artifice used in the petal to enrich the colour is something miraculous. At the extremity of it, a brown orange, as if burnt by the sun into a swarthier darkness, then vivifying itself within to gold;—gold raised and cloven into ridges, half ploughed, half chiselled, with something of the cleavage of rock, something of the rending of ice, in their deep-drawn furrows and writhed crests, more and more twisted and engraved and dragged into lengths of golden lava to the leaf's root, till in the centre, suddenly a fringe of crystal fibres, as blue as a hyacinth, and as clear as the dew, crowns all the field of flame with living hoar-frost.

These marvellous ridges and crests radiate from the stem of the leaf to its circumference, the crystalline central ridge opening at its termination into two principal folds which extend to the point of the leaf. The flower can only be studied as it grows. Nothing can be more dismal than the waxen lifelessness of one I have brought home and tried to keep in water.

5. Now, this I call a rightly wild flower, entirely resenting being gathered,—dying virtually the moment you take

Drawn by J Ruskin

Engraved by G Allen

COTONEASTER SPRAY.

Seen in front.

The plate[1] principally illustrative of Chapter IX. was given in last number; those which accompany the present one are finished with more care than usual, because having no time now to continue *The Laws of Fésole*, I shall endeavour to make the plates in *Proserpina* answer the further purpose of examples in such drawing schools as may hereafter follow the rules I gave at Oxford.

These two plates were intended to companion some talk, at the end of Chapter VIII., on the difference between the frontal plan and lateral profile of branches. I expected to find some result from it on the wood-graining —but have had no leisure for the intended sawings and planings.

Life is really quite disgustingly too short; one has only got one's materials together by the time one can no more use them. But let me say, once for all, in closing this fragment of work old and new, that I beg my friends very earnestly never to mind paragraphs about me in the public papers. My illnesses, so called, are only brought on by vexation or worry (for which said friends are often themselves in no small degree answerable), and leave me, after a few weeks of wandering thoughts, much the same as I was before,—only a little sadder and wiser!—probably, if I am spared till I am seventy, I shall be as sad and wise as I ever wish to be, and will try to keep so, to the end.

BRANTWOOD,
10*th August*, 1886.

[1] [That is, Plate XXVIII. ("Menthæ"), illustrating, and described in, Chapter IX. (above, p. 514). The others are Plates XXX. and XXXI.]

Drawn by J. Ruskin Engraved by [illegible]

COTONEASTER SPRAY.

Seen from the side.

# NOTES FOR "PROSERPINA"

1. PRIMULA
2. THE CYCLAMEN
3. ANAGALLIS TENELLA
4. MYRTILLA PRETIOSA
5. CONTORTA PURPUREA
6. COLOUR IN VEGETATION
7. CALICES

# NOTES FOR "PROSERPINA"

## 1. PRIMULA[1]

1. I HAVE resolved, in what I may be able yet to write of *Proserpina*, to adhere simply to the arrangements and names already given, only carrying them out into such further division as I find needful. There is often reason for them which I had now forgotten, and which the reader may never find out, but they are certainly prettier and easier than those given in other books, and may be learned by young people with little more trouble than nursery rhymes. Thus my chief reason for setting down the names Stella, Francisca, Primula, in that order,[2] was that they seem to me more easily said, or sung, in that cadence than with "primula" to begin; though every botanical author tells you in his account of every primrose, that primus is Latin for first. I have myself so far forgotten my Latin in English that the word sounds to me merely like a melodious form of "prim," for indeed the manner in which the daintiest and purest of the race hold themselves up on their long stalks,[3] as compared with the careless—not to say unscrupulous—way in which real roses litter themselves about, is, I cannot but feel, almost severely exemplary.

2. And the young florist may frankly take this habit of theirs for the characteristic one, associating with it the shorter growths called acaules—stalkless, or the more languid fulness of blossom in the common primrose. But he should absolutely refuse to entertain the notion of a primula's creeping or climbing anywhere. It either stands up, or may, if too heavy for its stalk, lie down, but it is always, whether single or clustered, carried by its single stalk from its single root. All the wistfully, discontentedly, or decoratively wandering or straggling tribes of the pimpernel and money-wort must be separately named and thought of, and the whole tribe, called by botanists Primulaceæ, will therefore be divided by Proserpina into four groups—Primula, Gisella, Anagallis, and Pacifica.[4]

3. Of all these, one common character seems to me pleasantly noticeable—their delicate uselessness, and totally unconscientious content in being pretty. One never hears of primrose pudding or pimpernel broth, or anagallis caudle or soldanelle salad. I have heard of cowslip wine, but never of a cowslip vineyard; and, broadly speaking, there are few field herbs so entirely without reputation for any available property of root, leaf, flower, seed, or berry; while, on the other hand, they never, either in aspect or

[1] [Here Ruskin takes up his order of "Cyllenides": see p. 354.]

[2] [See i. ch. viii. § 21, and ch. xi. § 27 (pp. 313, 353).]

[3] [A woodcut by Burgess, prepared for Ruskin—of Primula Veris officinalis—is given on Plate IV. in Vol. XIV.]

[4] [From a note elsewhere among Ruskin's MSS., it appears that "Pacifica" was to be "Proserpina's name for the loosestrife."]

act, can be conceived or accused as weeds. They do not embitter milk, nor exhaust meadows, nor entangle corn, nor encumber stream. Nothing more glad—more graceful or more innocent—rests in the dew of night, or answers with earthly light the light of day.

4. Beginning with the first, and far the largest order, the real Primulas, they all consist of a tube opening into a quite regular flat group of five more or less heart-shaped petals, each of which has a stamen rising out of the vein in its centre (Lindley, *Ladies' Botany*, vol. ii. p. 158), their colour yellow or lilac principally, fading into purple or red, but never bright red, nor at all into blue.

None of them ever become coarse or colossal; none, tiresomely or ridiculously small; they are never vulgar in quantity, nor, in their proper countries, so rare that one dares not gather them. If sometimes the primrose becomes joyfully innumerable, it is either on a chosen bank or in some partly-hidden glade or dell; and the real glory of the flower is to be set in separate peace and perfectness in the niche of a rock, or in hidden cluster found by surprise. I counted two hundred and seventy-four blossoms full out in one close wreath, the spring before last, beside my narrowest moorland stream.

## 2. THE CYCLAMEN

5. "The most capricious of all beautiful wild flowers," I called it above, p. 529. The ugly eyes admit any quantity of caprice, but the liking, for instance, of the snake's head to chequer itself like a snake, or of the Draconida to snap at one like a dragon, or of this cyclamen to twist itself like a corkscrew, are all instances of inconceivable humour in lovely blossoms.

Before any special note of the cyclamen, however, the reader must observe in general that there are two interferent forces which modify the forms of otherwise regular flowers. One of these is merely an exaggerated expression of spiral growth, seen principally and to best advantage in the family which I call Convolute, including in it both Bindweed and Gentian, but exaggerated in Contorta. The second great modifying force may be best called *Re*volute, not in the common sense of the word "revolve," but in that partly meant in "revolution" of "turning back." I call the Turk's-cap lily, for example, a "revolute" blossom, because its petals curl or roll backwards, as opposed to those of a rose, tulip, or globe ranunculus, which all curve inwards.

6. The cyclamen unites the action of both forces, and is spiral and reverted at once. But it is primarily spiral, the Circling plant—from the Greek *cyclos*, a circle — name first given, I believe, because its root is round and solid, no one knows why, except that the substance of it is said by all nations to be good to feed pigs with, and much approved by them, so that the pretty flower is insultingly called by the Italians, Pan Porcino; by the Spaniards, Mazan de Puerco; by the French, Pain de Porceau; and by the Dutch, Schwein-brot; and before all Apuleius[1] calls

[1] [*De Herbarum Virtutibus*, 17. By Apuleius (Barbarus); a book sometimes attributed to the better known Apuleius, the author of *The Golden Ass*.]

it the pig's turnip, Rapum Porcinum; and yet all the while I have never heard of any of them growing fields of cyclamen for their pigs, nor of their pigs routing in the fields for roots of cyclamen. That we should have no better popular name for it than Sow-bread is a sorry thing to confess.

7. The caprice of which I above accused it is mainly shown in its resolute down-looking, being by race a primula, and, by all custom and duty in that family, required to open with its face to the sky. Turning instead at first entirely to the ground, it afterwards recollects what was required of it, vigorously reverts its petals, and then twists them round to bring the inner surface to the light. And there is no other flower in the world that does the like; and what use is there in asking it for its reasons?

8. Among my first somewhat too fanciful notes for *Proserpina*, in which I held the spiral tendency to be always the origin of climbing power in a plant, I find this on the cyclamen, perhaps worth printing yet:—

> "It is a climbing plant that can never climb, and whose activity is all introverted on itself; a climbing plant always looking at the ground, and yet exquisitely beautiful. So that the teaching in it must be of good, and we may take it to mean the habit of a mind that could have climbed high, but for its fate, bound down and forced to look back, yet happy and lovely in the very restraint and reversion of all its instincts."

9. On thinking further of it I reverse my verdict of "too fanciful" in this passage, for indeed the entire existence of this flower is an enforcement of the same lesson. After the blossom dies, its stalk curls spirally four or five times round, "enclosing the germen in the centre and lowering it to the earth, reposing on the surface of the soil till the seeds are ready to escape" (Baxter[1]); "burying the ripening fruit in the earth" (Sowerby in old edition, the modern one says only the fruiting peduncles are closely rolled up, but nothing about burying in the ground[2]); * on the other hand, neither Baxter nor old Sowerby describe the fruit at all,

* "Whose fruit is forced, by the rigid coiling up of the flower-stalk, down upon the earth, where it lies concealed by the broad ivy-like leaves" (Lindley, *Ladies' Botany*, p. 189); but in vol. ii. p. 160: "When the flower is past it gently twists its peduncle till it becomes so short as to bury the tough leathery seed-vessel in the earth." Certainly no seed can be buried merely by the shortening of its peduncles unless the peduncles can fall as well as shorten, and as usual I have to look what happens myself, which I hope to do this autumn. But see at present this note farther on, to the chapter on Sundew. "The potato plant in addition to the stems which it elevates into the air sends out many more below the surface, much after the manner of the runner of a strawberry, only that they do not extend beyond twelve or eighteen inches. After a while these underground stems stop growing, but sap continues to flow into them from above, and there being no escape for it, accumulates at the extremity, where it gradually joins the potato" (Grindon, p. 8[3]). All very well, but why doesn't sap generally flow into roots and get shut up at the end? As usual in modern botany the author takes no notice of the potato's *eyes!*

[1] [W. Baxter: *British Phænogamous Botany*, vol. vi., No. 505.]
[2] [Vol. viii., No. 548 (ed. 1); vol. vii. p. 140 (ed. 3).]
[3] [For "Grindon," see p. 426 *n.*]

but young Sowerby says, "about the size of a small cherry, dull olive or reddish, speckled with short maroon-coloured streaks, the pericarp slightly fleshy, at length splitting at the apex into an inconstant number of teeth, which roll slightly back to allow the seeds to escape"; while, lastly, in Figuier's quite incidental and careless notice of the cyclamen—three lines in his 500 pages—I find this epithet of what the rest call its root, of which I have to think again—"leur tige souterraine."[1] And on looking to my own chapter on the root and stem (vol. i. chaps. ii. and viii., and ii. ch. vii.; and see Index, article Root) I find, for all the trouble of them, that the storehouse root (like carrot and turnip), p. 225; the "vaulted cloister," a bulb root (crocus), p. 226, and the root-stock or creeping stem (Sedge), p. 227, are not yet properly distinguished from the "tuber," p. 227, a sort of woollen underground store, made at intervals by a creeping stem and cover, which is a solid bulb like that of saffron. But there is no need to trouble ourselves with these names of conditions peculiar to a few plants, only it is important to me just now to know—and I don't know—if the cyclamen root be really what Figuier calls it, a massive underground stem, or as Wooster calls it—*Alpine Plants*, i. p. 81[2]—a tuber. Old Sowerby calls it a large roundish knob, throwing out fibres. As the plant is perennial, I suppose Figuier is right, and that this knob is a true stem.

10. I will quote him further on the question of roots in another place,[3] finishing here my own notes on the Cyclamen. Of which the next is as follows: "Pigs in Eleusinian mysteries; Plant, belonging to Ceres, its circularness especially. Dances of Iacchus in *Frogs*—conf. evil circles, *περίδρομοι κύνες*. Mitchell, *Frogs*, 445."[4] These memoranda were to have been expanded into a treatise on the mythic meaning of spirals—of the wheel of Fortune, and nine spheres of fate, which I hope the reader laments the loss of; this only it is worth saying still, that the running round of the Dogs (Furies) in Aristophanes certainly means the tormenting recurrence of painful thoughts in a circle from which there is no escape. I do not know when I found that the cyclamen is sacred to Ceres, but the subterranean stem, stooping flower, and buried, or at least hidden, front give ample reason for the dedication. There is a farther, though more subtle one, in its dark purple colour, which the Greeks always associated with death. The cyclamen of the Alps, according to my own notes (on the Salève and in Valley of Adige), is white dashed with purple;[5] the Greek variety described by Wooster, ii. p. 52, is crimson, with leaves purple on the under side.[6]

[1] [*Histoire des Plantes*, 1865, p. 322.]

[2] [*Alpine Plants: Figures and Descriptions of some of the most Striking and Beautiful of the Alpine Flowers*, edited by David Wooster, 1872; a work dedicated to Ruskin's friend, Sir Walter Trevelyan.]

[3] [This, however, was not done.]

[4] [*The Frogs of Aristophanes*, with Notes by T. Mitchell, 1839, pp. 98-99.]

[5] [Elsewhere in Ruskin's notes there is this further passage:—

"The petals, white, dashed with small stains of purple, and the flower's love of the shade, gave the idea of its being able to take away stains of sun-burning. It is as if it were condemned always to be an earth plant, and the leaves were splashed with white earth by the foot passing near."]

[6] [It may be that Ruskin took from the cyclamen leaf the idea for a binding in which some of his later books were issued—namely, green roan, with purple "end papers."]

## 8. ANAGALLIS TENELLA[1]

11. Next to the cyclamen, in the order of the Primulaceæ, the young botanist should certainly place the Anagallis Tenella. It is entirely absurd to call this flower a pimpernel: the proper form of a pimpernel is a flat cinqfoil, like the forget-me-not;—the anagallis is a beautiful vase, taking exactly the form of the cyclamen, only held up instead of down, and very singularly it has the same close friendship with the earth; the chains of its small round leaves cling so closely to the soil that they are often covered by it, and take root as they advance, like underground stems, while the slender stalks of its flowers "afterwards curve down to bury the fruit" (Lindley, ii. p. 161). Sowerby (old) says nothing of this habit, but draws the fruit-bearing stalk with a single spiral curl, still bearing the fruit upwards.[2]

12. With the Primulas, but not as sub-orders or species, only as partially resembling groups, it will be best practically to arrange the Pimpernels and Oxalids, connecting these two by careful study and comparison of anagallis tenella and oxalis acetosella.[3] These flowers agree in one character of extreme interest—the simplicity and purity gained by the delicate veining of their petals, which is just like the stripe of a country girl's print gown. The same character is given to the veronica and the country-bred pansies by the same means, and it is, as I have just said, of extreme interest in leading us to trace to their deepest sources, and the first impression which the eye can receive, our sensations of modesty and propriety.

13. In order to feel more distinctly the nature of the question, think of the colours and distribution of colours in the flowers, which, however lovely, had no claim to the charm of simplicity. The common Sweet William, for instance,—the type, as it seems to me, of the most perfect crimson in the world, essentially a flower for a cottage garden,[4] perfectly free from all expression of glare or pride, yet in the richness of its rent and blackened velvet, and the—we should call it in a picture—studied opposition of the exquisitely complex, green-grey of its stamens,—reminds us rather of the richest work of Titian than of a cheap print. So the orange lily just described,[5] in a yet higher degree, has expressions of pride and power and luxuriant pleasure mingled in its frame and fire.

[1] [The little bog Pimpernel. See the passage on the flower in the Introduction, above, p. xlii. Ruskin refers to his study of this plant in *Fors Clavigera*, Letter 81, § 15. Elsewhere among his botanical notes he says:—

> "The Anagallidæ are alternate-leaved, creeping, their petals pointed, and in the pimpernels decorated with a minute fringe, connecting them with sundews. They have a slightly spiral tendency, centralizing itself in the Cyclamen; and they are all to be associated round it and the Anagallis, because of the wonderful burying of their own fruit."]

[2] [Vol. viii., No. 530 (1st edition).]

[3] [For Ruskin's study of this plant (the wood sorrel), see above, Plate II. and p. lii. For other references to it, and its name in Dauphiné (Pain du Bon Dieu), see Vol. III. p. 175 *n.*, Vol. IV. p. 172 *n.*, and Vol. VI. p. 422 *n.*]

[4] [So Matthew Arnold in *Thyrsis*: "Sweet-William with his homely cottage smell."]

[5] [See above, p. 533.]

On the other hand, the stocks and willow-herbs in their common meagreness are as far removed from the refinement, as the others from the modesty, of the veined blossoms we are examining.

But I leave the question for a minute or two to note their characters more particularly.

14. The oxalids, by their trefoil leaves and podlike seeds, are to be thought of as the link between the primulas and the pease, with some little leaning towards the geraniums; while the anagallis tenella, curiously distinct in its nature, is best thought of as a link between the primulas and loose water plants, like duckweed. It has one very ignoble character —the uncertainty of its number of leaves, like the smaller celandine, continually throwing out a sixth petal, or showing a disposition to let one of its five petals draw into two; but with this vagueness in form it seems to carry refinement in structure to an extreme. In Sowerby's vile plate of it[1] the structural illustrations at the bottom as usual are unexplained, but I suppose that one of them is meant to represent a single filament of the sugary cluster that surrounds the style. I cannot myself trace in these filaments more than a succession of transparent beads; but I cannot do microscopic work, and, in any case, the fineness of their divisions is equally marvellous, and especially noticeable because this beading connects the plant slightly with the sundew, its companion.

15. We have, then, for complete character of flower, a form put intermediate between a bell and a star,—which, seen at the side, is like the Lucia—seen from above, like the Stella—but not sharp petalled;* but a star hollowed into a cup; pale violet-pink in general relief among the dark moss; not merely pale pink, but watery pink, as it were—as if the print was of a dear old frock that had been nearly washed out—the narrow stripes of it, six or seven at unequal distances—of a little darker roses; but all passing down to the centre from the watery pink to as watery a green; then in the centre of that, a white—that is, not pure white, but broken by its infinite division like sparkly wool; and in the middle of that a little cross of gold.

* Here in pure outline are the three typical forms of Stella, Anagallis, and Rose:—

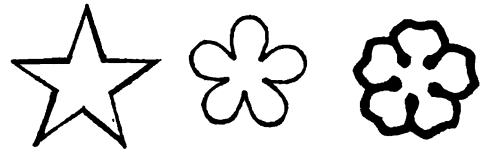


*Fig.* 40

[1] [Plate MCXLVIII. in vol. vii. p. 152 (third edition).]

## 4. MYRTILLA PRETIOSA[1]

16. With respect to the leafage of this lovely plant, the reader must note one or two general principles of leafage yet undwelt on.

All herbaceous and shrub-growing plants must have their leaves first thought of as mainly divided into round, and lance-shape; the round ones, as of the violet and geranium, forming beautiful foreground groups in *filling up the hollows* of angular rocks; and the lance-shape, forming the most beautiful clusters of foliage that *spring out* from them.

I think the reader, without any engraving to illustrate these two decorative functions, may easily observe and feel for himself the difference in effect between the grace of boughs springing out with pointed leaves from the brow of a rock against the sky or distance, and a cluster of geranium or violet leaves in the same position;—he would feel that the latter stopped the action of the stalk that bore them—as the round boss of a cherry does, and could not express its spring or force. On the contrary, for leaves couchant in a rock cranny, the rounded form is the best and richest opposition to the straight sides of it; and is farther pleasant as distinguishing itself more completely from grass, and fallen twigs.

The rounded form is nearly always made more decorative by its divided lobes,—first simply, as in the oxalis and columbine; then richly, as in the alchemilla, geranium, and the like, dependent for their interest on nearness to the eye, and on the relief of their forms by *shade*. None of these finely divided structures can be seen against light,—daylight, that is to say,—for the brightness prevents the eye from following their intricacies; but the pointed and lance-like leaves are perfectly distinguishable (being also on a somewhat larger scale), and are so seen to best advantage.

The reader will at once remember, on this general fact being brought to his notice, that neither the leaves of forest trees, nor of any shrubs which spring far into the air, are ever divided* like ferns, silver-weeds, or geranium leaves,—it being the purpose of Nature that the forms of these latter should be studied when relieved against shade, and by the depressed eyes, relieved from all severe trial of light.

Of the spear-shaped leaves, those I have called Apolline[2] have, indeed, for an essential quality, *serration*, this character being necessary to express their higher order, as distinguished from grass and conifer leaves. But the great group of the Oreiades, though adorned with this serration in their higher forms, yet, characteristically, refuse it, and mark their humbler and hardier character by a structure of leaf which in part resembles that of the Drosids, and in part that of the Conifers.

* The mountain ash and acacia are no exceptions. They have not divided leaves, but clustered leaves symmetrically arranged. Of palms and other tropical forms, there is no discussion here, as all the principles of their beauty are modified by their larger scale.

[1] [Of Ruskin's order "Oreiades"; the whortleberry. See i. ch. xii., p. 362.]
[2] [See above, p. 238.]

## 5. CONTORTA PURPUREA

17. The Contorta Purpurea rises out of a group of Arethusan leaves (see Plate XXIII. p. 341) which are of pale dull green on the outer surface, but spotted (morbidly) with black on the inner. I had no room in my plate to draw a full-grown blossom, so the crowded cluster represents only the earlier stage of the flowers, which presently rises into a purple spire composed of from twenty to thirty flowers set in close order on their

*Fig.* 41

virgula, which at the top becomes purple *with* them, as also the twisted stalks of each separate blossom which we have now to examine. A single one is drawn in profile at A, in front at B, Fig. 41.

It consists essentially of the twisted stalk, carrying six petals. Of these six petals, two, *a* and *b* (Fig. 42), form what I shall call the crest of the flower; one, *c*, its lappet; two, *d* and *e*, its casque (these being prolonged backwards and upwards into a spur); and finally one, *f*, its gorget.

*Fig.* 42

In Contorta Maculata, which I find in my upper field, 16th June, the crest leaves diverge on a level on each side of the lappet (Sowerby says they are reflexed upwards [1]), and the gorget, divided as he describes into three lobes, is veined, tiger-like, with purple or white—the whole flower pale lilac in effect. The two casque-petals, in the Aeria sent me by Miss Beever,[2] are depressed beneath the spur, which opens into a huge cup above the gorget.

The lappet is laid over the junction of the two pieces of the casque, exactly as a protective piece of armour might be (or a roofing tile over the two below), and under the shelter of the casque rise the grotesque seed-producer-portions (which Mr. Darwin has sufficiently described [3]), but these have nothing to do with the effect of the flower, except so far as that the gorget, underneath them, is pale, and spotted with extremely dark spots of

[1] [Vol. ix. p. 101: letterpress opposite the plate of Orchis maculata, Spotted Orchis.]

[2] [See the Introduction, above, p. xxxix.]

[3] [See ch. i. of *The Various Contrivances by which Orchids are fertilised by Insects.*]

purple, which seem to be all the colour it had, concentrated, venomously, as in the foxglove.

The gorget, below, is cut into three lobes, and the central one again partly divided, but on the whole square in effect. It is impossible to draw the gorget properly without front and side views, but squeezed flat its outline is approximately something like this—

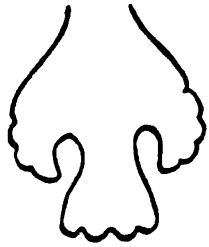


*Fig.* 48

The flower will not be pulled off its twisted seed vessel (the seed vessel breaks first), but the gorget easily tears away from the spur, which is a prolongation partly of the casque, partly of the germinal processes. Cutting it open I find it a mere empty sack and not at all deserving the name of a "spur." I think, therefore, I shall probably call this appendage the "sacque," not the spur.

---

## 6. COLOUR IN VEGETATION

18. The first great fact, which we have to consider respecting vegetation is that on the whole, and only with such exceptions as we may best understand by keeping the great law clearly in our minds, it is green in life, and golden in death.

I. Green in life, that is to say, in youthful and progressive life. Green is essentially its sign of advancing strength, therefore of immaturity. It is its unripe colour.

II. Golden in death, or in the pause of perfect state which precedes it. The ripe ear of corn is the best type of this pause in perfectness: it will keep in its golden sheath for centuries. But I am not sure whether even in the fading leaf the change of colour signifies real process of perishing, or whether it is only the arrest of active function by age or frost. Having no reproductive energy and as its end was to breathe, not to *be*, when it ceases breathing, it must die, but it is well nevertheless to look upon its first autumnal glow as the honour of fulfilled function, and a kind of ripeness, rather than discoloration by decay.

---

Note the strange preciousness of the jetty browns in the lotus tribe, velvety and grey in bloom of surface, giving a kind of subdued black.

Then, the Larkspur is a strange example of fluctuating and broken colour, from pure deep blue to lilac. The whole flower is conceived under an ideal of cramped or shrivelled form, none of its sepals are regularly or finely outlined or proportioned, and the spur entirely wrinkled. Its perfect state seems to be a pure blue, very nearly that of gentian, enriched by a permanent dew of small spherical globules.

---

We will return, however, before taking any farther note of the autumnal state, to the colour of spring.

And of this note first that it is essentially connected with moisture, especially with a diffused and long retained moisture,—with "damp." If we could see the earth from a sufficient distance, we should at once distinguish its dry places and damp places; the districts of its vegetation would look like green mould on the bronzed ball.

Of this green colour in strength, there are two essential varieties, one vigorous in paleness, like that of rice, or pondweed, or some deep wood-moss, this pale green nearly always indicating the immediate presence of moisture; the other a vigorous dark green, like that of the laurel leaf, which indicates strength of vegetation in which the moisture is entirely latent, and concentrated into enduring life under sunshine (which is the main physical meaning of the fable of Apollo and Daphne).[1]

## 7. CALICES

19. Recollect generally that a calyx is the part of a flower in which the pretty leaves are packed to be kept safe; and that a flower budding is very like a pretty dress being taken out of a carpet bag and unfolded. When it is packed up quite close, and the mouth of the bag shut, we call it a bud. When the calyx opens a little you may generally see the folds of the silken or satin dress inside looking as if they never would shake right. But they grow out and shake or shape themselves all right, and the calyx usually stands quite quietly beneath to hold them.

But some calices die, and fall, before the flower. The most interesting of all is that of the poppy: it holds the splendid flower packed so close that the moment it comes out the calyx drops off in two pieces, as if it were quite tired, and could not keep on the stalk a moment longer. The buttercup calyx gets white and thin, and soon dies. But in the rose the calyx survives the flower, and becomes in some roses a very interesting thing indeed to young people.

In the primula the calyx also survives the flower,—and indeed these long-lived calices are the most common: they have a slow strong life, and use none of their strength in growing, being early dwarfed, and for

[1] [Compare Vol. XIII. p. 150.]

the most part subordinate to the flower. The first thing to consider in all flowers is therefore the relation of corolla to calyx; look at them first in the perfect flower, and note what oppositions or assistances of form and colour they render to each other when both are perfect. (Thus in the lilac flower the little green calyx that holds it is scarcely more than the end of its stalk, and the purple corolla is everything; but in a currant blossom the calyx is nearly everything, and the corolla consists only of five minute white scales,—and some flowers have no corollas at all.) Then, having ascertained the perfect relation of both, examine the times and ways in which they each open and close, and live and die. And one thing you may generally note about their relative forms. As a calyx is originally folded tight over the flower, and has to open deeply to let it out, it is nearly always composed of sharp-pointed leaves like the gores of a balloon, while corollas, having to open out as wide as possible to show themselves, are typically like cups or plates, only cut into their edges here and there for ornamentation's sake.

# INDEX

I. DESCRIPTIVE NOMENCLATURE

II. PLANTS SPOKEN OF UNDER THEIR ENGLISH NAMES

III. PLANTS SPOKEN OF UNDER THEIR LATIN OR GREEK NAMES

# INDEX I[1]

## DESCRIPTIVE NOMENCLATURE

PLANTS in perfect form are said, at page 218, to consist of four principal parts: root, stem, leaf, and flower. The reader may have been surprised at the omission of the fruit from this list. But a plant which has borne fruit is no longer of "perfect" form. Its flower is dead. And, observe, it is further said, at page 250 (and compare Chapter III., § 2, p. 229), that the use of the fruit is to produce the flower: not of the flower to produce the fruit. Therefore, the plant in perfect blossom, is itself perfect. Nevertheless, the formation of the fruit, practically, is included in the flower, and so spoken of in the thirteenth line of page 218.

Each of these four main parts of a plant consist normally of a certain series of minor parts, to which it is well to attach easily remembered names. In this section of my index I will not admit the confusion of idea involved by alphabetical arrangement of these names, but will sacrifice facility of reference to clearness of explanation, and taking the four great parts of the plant in succession, I will give the list of the minor and constituent parts, with their names as determined in *Proserpina*, and reference to the pages where the reasons for such determination are given, endeavouring to supply, at the same time, any deficiencies which I find in the body of the text.

### I. THE ROOT


PAGE

Origin of the word Root . . . . . 218

The offices of the root are threefold: namely, Tenure, Nourishment, and Animation . . . . . 218–224

The essential parts of a Root are two: the Limbs and Fibres . . 222

I. THE LIMB is the gathered mass of fibres, or at least of fibrous substance, which extends itself in search of nourishment . . 222

II. THE FIBRE is the organ by which the nourishment is received . 223

The inessential or accidental parts of roots, which are attached to the roots of some plants, but not to those of others (and are, indeed, for the most part absent), are three: namely, Store-houses, Refuges, and Ruins . . . . . 225

III. STORE-HOUSES contain the food of the future plant . . . 225

IV. REFUGES shelter the future plant itself for a time . . . 225


[1] [This Index was written by Ruskin for volume i. only. A few additional references have now been added.]

V. Ruins form a basis for the growth of the future plant in its proper order . . . . . 228

Root-stocks, the accumulation of such ruins in a vital order . . 229
General questions relating to the office and chemical power of roots 231

The nomenclature of Roots will not be extended, in *Proserpina*, beyond the five simple terms here given: though the ordinary botanical ones—corm, bulb, tuber, etc.—will be severally explained in connection with the plants which they specially characterise.[1]

## II. The Stem

Derivation of word . . . . . 307
The channel of communication between leaf and root . . . 335
In a perfect plant it consists of three parts:

I. The Stem (Stemma) proper.—A growing or advancing shoot which sustains all the other organs of the plant . . . . . 307
It may grow by adding thickness to its sides without advancing; but its essential characteristic is the vital power of Advance . . 307
It may be round, square, or polygonal, but is always roundly minded 307
Its structural power is Spiral . . . . . 309, 484
It is essentially branched; having subordinate leaf-stalks and flower-stalks, if not larger branches . . . . . 310
It develops the buds, leaves, and flowers of the plant . . . . 312
This power is not yet properly defined, or explained; and referred to only incidentally throughout the eighth chapter . . 305-308

II. The Leaf-stalk (Cymba) sustains, and expands itself into, the Leaf . . . . . 303-305
It is essentially furrowed above, and convex below . . . . . 305
It is to be called in Latin, the Cymba; in English, the Leaf-stalk . 306

III. The Flower-stalk (Petiolus):
It is essentially round . . . . . 302, 307
It is usually separated distinctly at its termination from the flower . 302
It is to be called in Latin, Petiolus; in English, Flower-stalk . . 302

These three are the essential parts of a stem. But besides these, it has, when largely developed, a permanent form: namely,

IV. The Trunk.—A non-advancing mass of collected stem, arrested at a given height from the ground . . . . . 309

The stems of annual plants are either leafy, as of a thistle, or bare, sustaining the flower or flower-cluster at a certain height above the ground. Receiving therefore these following names:—

V. The Virga.—The leafy stem of an annual plant, not a grass, yet growing upright . . . . . 312

VI. The Virgula.—The leafless flower-stem of an annual plant, not a grass, as of a primrose or dandelion . . . . . 313, 317

[1] [This was never done with any fulness; but see p. 542.]

PAGE

VII. The Filum.—The running stem of a creeping plant . . . 427

It is not specified in the text for use; but will be necessary: so also, perhaps, the Stelechos, or stalk proper (316), the branched stem of an annual plant, not a grass; one cannot well talk of the Virga of hemlock. The "Stolon" is explained in its classical sense at page 311, but I believe botanists use it otherwise. I shall have occasion to refer to, and complete its explanation, in speaking of bulbous plants.[1]

VIII. The Caudex.—The essentially ligneous and compact part of a stem . . . . . 317

This equivocal word is not specified for use in the text, but I mean to keep it for the accumulated stems of inlaid plants, palms, and the like; for which otherwise we have no separate term.

IX. The Avena.—Not specified in the text at all; but it will be prettier than "baculus," which is that I had proposed, for the "staff" of grasses. See page 326.

These ten names are all that the student need remember; but he will find some interesting particulars respecting the following three, noticed in the text:—

Stipa.—The origin of stipend, stupid, and stump . . . . . 317

Stipula.—The subtlest Latin term for straw . . . . . 317, 404

Caulis (Kale).—The peculiar stem of branched eatable vegetables . 317

Canna.—Not noticed in the text; but likely to be sometimes useful for the stronger stems of grasses.

III. The Leaf

Derivation of word . . . . . 218
The Latin form "folium" . . . . . 230
The Greek form "petalos" . . . . . 231
Veins and ribs of leaves, to be usually summed under the term "rib" . . . . . 232
Chemistry of leaves . . . . . 234
Bracts . . . . . 251, 397, 404

The nomenclature of the leaf consists, in botanical books, of little more than barbarous, and, for the general reader, totally useless attempts to describe their forms in Latin. But their forms are infinite and indescribable except by the pencil. I will give central types of form in the next volume of *Proserpina*;[2] which, so that the reader sees and remembers, he may *call* anything he likes. But it is necessary that names should be assigned to certain classes of leaves which are essentially different from each other in character and tissue, not merely in form. Of these the two main divisions have been already given: but I will now add the less important ones which yet require distinct names.

[1] [This, however, was not done.]

[2] [This, again, was not explicitly done; but see the pages of the second volume, to which references are now added, and the hitherto-unpublished passage, p. 545.]

PAGE

I. Apolline.—Typically represented by the laurel . . . 238, 545

II. Arethusan.—Represented by the alisma . . . 241, 323, 546

It ought to have been noticed that the character of serration, within reserved limits, is essential to an Apolline leaf, and absolutely refused by an Arethusan one.

III. Dryad.—Of the ordinary leaf tissue, neither manifestly strong, nor admirably tender, but serviceably consistent, which we find generally to be the substance of the leaves of forest trees. Typically represented by those of the oak.

IV. Abietine.—Shaft or sword-shape, as the leaves of firs and pines.

V. Cressic.—Delicate and light, with smooth tissue, as the leaves of cresses, and clover . . . . . 398

VI. Salvian.—Soft and woolly, like miniature blankets, easily folded, as the leaves of sage . . . . . 398, 519

VII. Cauline.—Softly succulent, with thick central ribs, as of the cabbage . . . . . 398

VIII. Aloeine.—Inflexibly succulent, as of the aloe or houseleek . 422

No rigid application of these terms must ever be attempted; but they direct the attention to important general conditions, and will often be found to save time and trouble in description.

## IV. The Flower

Its general nature and function . . . . . 249
Consists essentially of Corolla and Treasury . . . . . 259
Has in perfect form the following parts:—

I. The Torus.—Not yet enough described in the text. It is the expansion of the extremity of the flower-stalk, in preparation for the support of the expanding flower . . . . 251, 376

II. The Involucrum.—Any kind of wrapping or propping condition of leafage at the base of a flower may properly come under this head; but the manner of prop or protection differs in different kinds, and I will not at present give generic names to these peculiar forms.

III. The Calyx (The Hiding-place).—The outer whorl of leaves, under the protection of which the real flower is brought to maturity . . . . . 548
Its separate leaves are called Sepals . . . . . 261

PAGE

IV. The Corolla (The Cup).—The inner whorl of leaves, forming the flower itself. Its separate leaves are called Petals . . . 254

V. The Treasury.—The part of the flower that contains its seeds 259, 372

VI. The Pillar.—The part of the flower above its treasury, by which the power of the pollen is carried down to the seeds . . 259
It consists usually of two parts: the Shaft and Volute . . . 259
When the pillar is composed of two or more shafts, attached to separate treasury-cells, each cell with its shaft is called a Carpel . . . . . 384

VII. The Stamens.—The parts of the flower which secrete its pollen 259
They consist usually of two parts, the Filament and Anther, not yet described.

VIII. The Nectary.—The part of the flower containing its honey, or any other special product of its inflorescence. The name has often been given to certain forms of petals of which the use is not yet known. No notice has yet been taken of this part of the flower in *Proserpina*.

These being all the essential parts of the flower itself, other forms and substances are developed in the seed as it ripens, which, I believe, may most conveniently be arranged in a separate section, though not logically to be considered as separable from the flower, but only as mature states of certain parts of it.

## V. The Seed

I must once more desire the reader to take notice that, under the four sections already defined, the morphology of the plant is to be considered as complete, and that we are now only to examine and name, farther, its *product;* and that not so much as the germ of its own future descendant flower, but as a separate substance which it is appointed to form, partly to its own detriment, for the sake of higher creatures. This product consists essentially of two parts: the Seed and its Husk.

I. The Seed.—Defined . . . . . 372
It consists, in its perfect form, of three parts . . . . . 373

These three parts are not yet determinately named in the text: but I give now the names which will be usually attached to them.

A. *The Sacque.*—The outside skin of a seed . . . . . 373
B. *The Nutrine.*—A word which I coin, for general applicability, whether to the farina of corn, the substance of a nut, or the parts that become the first leaves in a bean . . . . 373
C. *The Germ.*—The origin of the root . . . . . 373

PAGE
II. THE HUSK.—Defined . . . . . 374
Consists, like the seed when in perfect form, of three parts:
A. *The Skin.*—The outer envelope of all the seed structures . 375
B. *The Rind.*—The central body of the Husk . . . 375–384
C. *The Shell.*—Not always shelly, yet best described by this general term; and becoming a shell, so called, in nuts, peaches, dates, and other such kernel-fruits . . . . . 375

The products of the Seed and Husk of Plants, for the use of animals, are practically to be massed under the three heads of BREAD, OIL, and FRUIT. But the substance of which bread is made is more accurately described as Farina; and the pleasantness of fruit to the taste depends on two elements in its substance: the juice, and the pulp containing it, which may properly be called Nectar and Ambrosia. We have therefore in all four essential products of the Seed and Husk—

A. Farina. Flour . . . . . 380
B. Oleum. Oil . . . . . 380
C. Nectar. Fruit-juice . . . . . 381
D. Ambrosia. Fruit-substance . . . . . 381

Besides these all-important products of the seed, others are formed in the stems and leaves of plants, of which no account hitherto has been given in *Proserpina*. I delay any extended description of these until we have examined the structure of wood itself more closely; this intricate and difficult task having been remitted[1] to the days of coming spring; and I am well pleased that my younger readers should at first be vexed with no more names to be learned than those of the vegetable productions with which they are most pleasantly acquainted: but for older ones, I think it well, before closing the present volume, to indicate, with warning, some of the obscurities, and probable fallacies, with which this vanity of science encumbers the chemistry, no less than the morphology, of plants.

Looking back to one of the first books in which our new knowledge of organic chemistry began to be displayed, thirty years ago, I find that even at that period the organic elements which the cuisine of the laboratory had already detected in simple Indigo, were the following:—

Isatine,
Bromisatine,
Bibromisatine;
Chlorisatine,
Bichlorisatine;
Chlorisatyde,
Bichlorisatyde;
Chlorindine,
Chlorindoptene,
Chlorindatmit;
Chloranile,
Chloranilam, and
Chloranilammon.

And yet, with all this practical skill in decoction, and accumulative industry in observation and nomenclature, so far are our scientific men from arriving, by any decoctive process of their own knowledge, at general results

[1] [See above, p. 338 *n.*]

useful to ordinary human creatures, that when I wish now to separate, for young scholars, in first massive arrangement of vegetable productions, the Substances of Plants from their Essences; that is to say, the weighable and measurable body of the plant from its practically immeasurable, if not imponderable, spirit, I find in my three volumes of close-printed chemistry, no information whatever respecting the quality of volatility in matter, except this one sentence:—

"The disposition of various substances to yield vapour is very different: and the difference depends doubtless on the relative power of cohesion with which they are endowed." *

Even in this not extremely pregnant, though extremely cautious, sentence, two conditions of matter are confused, no notice being taken of the difference in manner of dissolution between a vitally fragrant and a mortally putrid substance.[1]

It is still more curious that when I look for more definite instruction on such points to the higher ranks of botanists, I find in the index to Dr. Lindley's *Introduction to Botany*—seven hundred pages of close print—not one of the four words "Volatile," "Essence," "Scent," or "Perfume." I examine the index to Gray's *Structural and Systematic Botany*, with precisely the same success. I next consult Professors Balfour and Grindon, and am met by the same dignified silence. Finally, I think over the possible chances in French, and try in Figuier's indices to the *Histoire des Plantes* for "Odeur"—no such word! "Parfum"—no such word. "Essence"—no such word. "Encens"—no such word. I try at last "Pois de Senteur," at a venture, and am referred to a page which describes their going to sleep.

Left thus to my own resources, I must be content for the present to bring the subject at least under safe laws of nomenclature. It is possible that modern chemistry may be entirely right in alleging the absolute identity of substances such as albumen, or fibrine, whether they occur in the animal or vegetable economies. But I do not choose to assume this identity in my nomenclature. It may, perhaps, be very fine and very instructive to inform the pupils preparing for competitive examination that the main element of Milk is Milkine, and of Cheese, Cheesine. But for the practical purposes of life, all that I think it necessary for the pupil to know is that in order to get either milk or cheese, he must address himself to a Cow, and not to a Pump; and that what a chemist can produce for him out of dandelions or cocoanuts, however milky or cheesy it may look, may more safely be called by some name of its own.

This distinctness of language becomes every day more desirable, in the face of the refinements of chemical art which now enable the ingenious confectioner to meet the demands of an unscientific person for (suppose) a lemon drop, with a mixture of nitric acid, sulphur, and stewed bones. It is better, whatever the chemical identity of the products may be, that each should receive a distinctive epithet, and be asked for and supplied, in vulgar English, and vulgar probity, either as essence of lemons, or skeletons.

* *Elements of Chemistry*, p. 44. By Edward Turner; edited by Justus Liebig and William Gregory. Taylor and Walton, 1840.

[1] [On this passage see above, p. 509.]

I intend, therefore,—and believe that the practice will be found both wise and convenient,—to separate in all my works on natural history the terms used for vegetable products from those used for animal or mineral ones, whatever may be their chemical identity, or resemblance in aspect. I do not mean to talk of fat in seeds, nor of flour in eggs, nor of milk in rocks. Pace my prelatical friends, I mean to use the word "Alb" for vegetable albumen; and although I cannot without pedantry avoid using sometimes the word "milky" of the white juices of plants, I must beg the reader to remain unaffected in his conviction that there is a vital difference between liquids that coagulate into butter, or congeal into India-rubber. Oil, when used simply, will always mean a vegetable product: and when I have occasion to speak of petroleum, tallow, or blubber, I shall generally call these substances by their right names.

There are also a certain number of vegetable materials more or less prepared, secreted, or digested for us by animals, such as wax, honey, silk, and cochineal. The properties of these require more complex definitions, but they have all very intelligible and well-established names. "Tea" must be a general term for an extract of any plant in boiling water: though when standing alone the word will take its accepted Chinese meaning: and essence, the general term for the condensed dew of a vegetable vapour, which is with grace and fitness called the "being" of a plant, because its properties are almost always characteristic of the species; and it is not, like leaf tissue or wood fibre, approximately the same material in different shapes, but a separate element in each family of flowers, of a mysterious, delightful, or dangerous influence, logically inexplicable,[1] chemically inconstructible, and wholly, in dignity of nature, above all modes and faculties of form.

[1] [On this passage see above, p. 406.]

# INDEX II

## TO THE PLANTS SPOKEN OF IN THIS VOLUME, UNDER THEIR ENGLISH NAMES[1]


Almond, 359, 373, 374
Alpine rose, 268, 367 and *n.*, 369 *n.*
*Apple, 278*, 375, 385
„ blossom, 284
„ pip, 373
Apricot, 381
Archangel, 515 and *n.*, 525
*Ash, 293, 300*
*Aspen* leaf, *305*
*Asphodel, 203, 206, 226 n.*
Aster, 458, 468

Balsams, 467
Barley, 297
Basil, 344, 353, 479, 480, 514
*Bay* leaf, *238*
*Bean, 279*, 373, 374
*Bed-straw, 294*
Bell gentian, 409, 410
Betony, 390, 516 and *n.*, 524. *See also* Salvia Silvarum (Index III.)
Bilberry, 238. See also Myrtilla (Index III.)
*Bindweed, 313. See also* Convoluta (Index III.)
*Birch, 293, 334*, 335
Blackberry, 376
*Blackthorn, 293, 300*
*Blaeberry, 238, 362*
*Bluebell, 313*, 467. *See also* Campanula (Index III.)
Bog-bean, 423 *n. See* Lucia (Index III.)
Bog-heath, 204, 205 *n.*, 252. *See also* Erica (Index III.)
Bog-violet, 425
*Bramble, 293*, 299, *352* and *n.*, 483
Bugle, 525
*Burdock, 287*, 463, 468, 525
„ leaf, *303*, 304, and Figs. 13, 14
*Burnet, 271*
*Butterbur, 292*
Buttercup, 389, 437, 439, 529
Butterwort, 355 *n.*, 421 *seq.*, 425, 430, 431, 432. *See also* Pinguicula (Index III.)

*Cabbage, 303, 317*
*Captain-salad, 317*
*Carrot, 223, 225*
*Cauliflower, 303, 317*
*Cedar, 225, 246, 288*, 344, 500
*Celandine, 255*
*Cherry, 250, 302*, 374, 437, 507
„ blossom, 385


[1] [In Ruskin's "Index II.," the words "accepted by Proserpina" were added. The Index has now been completed, but as the editors are unable to say in all cases whether Ruskin intended to accept or reject the name, those words are omitted. The names and references printed in italics are those which were given in Ruskin's Index.]

THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

AN INITIAL FINE OF 25 CENTS
WILL BE ASSESSED FOR FAILURE TO RETURN THIS BOOK ON THE DATE DUE. THE PENALTY WILL INCREASE TO 50 CENTS ON THE FOURTH DAY AND TO $1.00 ON THE SEVENTH DAY OVERDUE.

MAY 5 1940
JUL 8 1944
APR 24 1945
19Jan'53HD
JUL 6 1953 LU
6Dec55VW
DEC 13 1955 LU
AUG 14 1976
REC. CIR. MAY 30 '77
MAY 3 1978

REC. CIR. DEC -1 '77
SEP 26 1981 27
RET'D MAR 31 1981
OCT 11 1985
NOV 17 1985
REC. CIR. NOV 17 1985
NOV 17 1985
JUL 24 1986
AUTO. DISC.
AUG 20 1986
AUG 08 2004

RETURNED TO
NOV 18 1977
BIOLOGY LIBRARY

LD 21-100m-7,'39(402s)

ARY - U.C. BERKELEY

906840

334134
Ruckin

ITY OF CALIFORNIA LIBRARY

*Plantain*, 525
„ leaf, *305*
Plum, 374, 378
Polypody, 527
*Pomegranate*, *277*, 278, *356 n.*, *376*
*Poplar* leaf, *239*
*Poppy*, 228, *253 seq.*, 258, 260, *266 seq.*, *279*, 437, 482, and Figs. 4, 5, 10, 11, 12
„ yellow Welsh, 269
Potato, 227, 381
*Primrose*, *260*, 313, *368 n.*, 440, 527, and Fig. 7. *See* Primula (Index III.)

Queen of the Meadow, 346

*Radish*, *225*, *228*
*Ragged Robin*, *321*, and Fig. 18
Raspberry, 376
Reeds, paper, 329
*Rhubarb*, *303*, 500
*Rice*, *239*
*Rock-foil*, *313*, 315. *See also* Francesca (Index III.)
Rock-roses, 524
*Roof-foil*, *313*, *315*. *See also* Houseleek; and Sedum, Stella (Index III.)
*Rose*, *249*, *253*, *257*, 265, *279*, *281*, *284*, *293*, *295*, *302*, *313*, 361, 389, 451, 467, 468, 485. *See also* Rosa (Index III.)
„ "hip," 376
„ seed, 378
"Rose of Sharon," 347
*Rush*, *223*, 500

Sage, 467, *523 n.* *See* Salvia (Index III.)
Sago palm, 500, 502 *n.*
St. John's wort, 475
Sanicle, 430, 431, 432 and *n.*
„ wood, 530
*Saxifrage*, *294*, *313*, *315*, 397, and Plate III.
*Scabious*, *316*
Sedges, 357
"Self-heal," 466 *n.* *See* Brunella (Index III.)
Silverweed, 348
Snapdragon, 390, 435, 437, 468, 527
Speedwell, 435, 436, 449, 473, 525. *See also* Veronica (Index III.)
*Spider Plant*, *203*
"Star of Bethlehem," 339, 340 and *n.*
*Stonecrop*, *315*
Strawberries, 351 and *n.*, 376, 385, 397, 439, 485, 529
Sunflower, 291, 292, 355 *n.* *See* Clytia, Heliades (Index III.)
*Sweetbriar*, *284*

Tamarisk, 364
Teasel, 458
Teil tree, 247
*Thistle*, 226, *279*, *288*, *291*, *292*, 293, 294, *295*, 297, 299, *313 n.*, 333, 458, 463
„ "Brantwood," Plate I.
„ *Creeping*, *309 n.*
„ leaves, 289, and Plates XIII., XXVII.
„ *Waste-*, *309 n.*, and Plate XVI.
*Thorns*, 279, 294, 295, 300
„ *Black*, *293*, *300*
*Thyme*, *291*, 292, 344, 467, 471, 480
*Tobacco*, *227*, *284*
*Tormentilla*, *285*, 348, 437
"Tree of Life," 347
*Turnip*, *225*

*Vine*, 233, *279*, *284 n.*, *310*, *312*
„ leaf, 385
*Violet*, *313*, 368 *n.*, 387 *seq.*, 440, 467
„ Calathian, 393 and *n.*
„ Cow, 398, 399, 401, 413
„ Crag, 401, 413 and *n.*
„ Dog, 399, 400, 401, 413
„ Field, 399, 400, 401, 412

*Violet*, Golden, 399, 400, 401, 409
„ Marsh, 399, 400, 401, 412
„ Marvellous, 399, 400, 401, 411
„ Monk's, 399, 400, 401, 413
„ Mountain, 399, 400, 401, 411
„ Queen, 399, 400, 401, 405

*Wallflower*, 286
Walnut, 359, 372, 374, 376
Water-flag. *See* Flag
*Wheat*, 279, 284, 300, 319
„ Grain of, 378, 382
„ Mummy, 329
Whortle-berries, 342 *n.*, 362, 527
Wood-sorrel, 204, 353, 354 and *n.*, 388, 527, and Plate II. *See* Oxalis (Index III.)
*Wreathe-wort*, 342, and Plate XXIII.

# INDEX III

## TO THE PLANTS SPOKEN OF IN THIS VOLUME, UNDER THEIR LATIN OR GREEK NAMES[1]


*Acanthus, 279,* 296
Acer, *344*
Ægle (Lemon), *353, 356*
Aeria, *343*
Æsculapiadæ, *357, 358 n.*
Agarics, *283, 357*
*Alata, 313,* 356 *n. See* Pea (Index II.)
Alcestis, *345, 353, 355 n.*
*Alisma* leaf, *239, 240,* and Fig. *3*
*Amaryllis, 226 n., 345, 357*
Anagallis, *438, 446,* 479, *543*
*Anemone, 283, 353,* 410, 468, *527, 529*
Anthericum Liliastrum. *See* Lily, St. Bruno's (Index II.)
Arbor vitæ, *326*
*Artemides, 353, 354* and *n.*
Arum, 279, *358*
*Asphodel. See* Index II.
Athenaides, *353, 356*
Atropa, *358,* 475
Aurantia, *353*
*Aurora, 353, 362 seq.,* 367, 370, *390*
*Azalea, 363,* 370

Bartsia, 482
Batrachides, *357, 358 n.*
Berberis, *345* and *n.*
Bromeliaceæ, 209
Brunella, 466 *seq.,* 521, *525,* and Fig. *38*

*Cactus, 231*
Calceolaria, *436*
Camellia, *357*
*Campanula, 313, 344, 353, 354 n., 389*
*Carduus, 309 n., 353*
Caryophyllaceæ, *314, 339, 346, 354 n.*
*Charites, 347, 348, 352, 353, 354*
Chenopodium, *524*
Cinchona, *357*
*Cistus, 253,* 272, *487*
*Clarissa, 313,* 339, *344, 353, 354, 529, 535*
„ Regina, *351*
Clematis, *345* and *n.*
Clytia, *353, 355 n.*
"Cocos nucifera," *339*
Coffea, *357*
Coleus, *524*
Conium, *345, 358*
*Contorta, 342, 343,* 467, *546,* and Fig. *41*
*Convoluta, 313, 353, 354* and *n.,* 438 and *n.*
Convolvulus, *252, 253, 257*
Crataegus, *344*
*Cyclamen. See* Index II.
Cyllenides, *353, 354* and *n.,* 480 *n., 539 n.*
Cytherides, *353, 355,* 387, 414, 416, *433,* 450, *459, 462*

Daphne, *345*
Delphides, *353, 356*
Demetridæ, *357, 358 n.*
"Dianthus," *354*
Digitalis, *358,* 482
Dionysidæ, *357, 358 n. 2*


[1] [Here, again, Ruskin's Index added the words "accepted by Proserpina." See the note on p. 561, which applies to this Index also.]

Draba Alpina, Fig. 15
Draconidæ, 358 and n., 467, 475, 476, 479, 481, 482, 498
Drosera, 357, 422, 433
*Drosidæ, 226* and *n., 357,* 358 *n.,* 360

*Ensatæ, 360*
*Erica, 205, 353, 362 seq.*
„ tetralix, 460, and Plate X.
*Eryngo, 263*
Eschscholtzia, 255

Falconia, 353, 355 *n.*
*Fragaria, 348,* 353, 360
*Francesca, 313, 315,* 353, 397
„ Fontium, 345
Fraxinus, 353, 356
Fungus (wood), 485
"Funkia," 339

Galeopsis, 514, 523
Gaultheria odorata ("Pejoa"), 369
*Geranium, 263,* 267, *293,* 482, and Plate XIV.
Geum, 410
Giulietta (Polygala), 353, 355, 387 *n.,* 414, 416, 451 *seq.,* 458 *n.,* 461
„ Amara, 461
„ Austriaca, 461, 462
„ Bracteolata, 460
„ Calcarea, 461
„ Chamæbuxus, 460
„ Cisterciana, 461
„ Depressa, 461
„ Mixta, 460
„ Oppositifolia, 460
„ Regina, 459, 461
„ Soror Regina, 461, 462
„ Speciosa, 460
„ Stipulacea, 460
*Gladiolus, 279, 284, 328*
Gramen Striatum, 202
Granata, 353, 356

Hedera, 357
Heliades, 353, 355 and *n.*
Hemerocallis, 199, 203
Hesperides, 353, 356

*Hyacinthus, 346. See* Index II.
*Hypnum, 207,* 208

Insula Dysenterica, Plate XVIII.
*Iris, 226 n.,* 278, 345, 357, 360, and Plate XXII.

Jacinthus, 357
Juncus, 344, 357

Kalmia, 345, 364

Labiatæ, 423 *n.,* 470 *n.,* 477, 514. *See* Vestales
Lapsania Communis, Plate XX.
Lathrea, 482
Laurus, 353, 359
Lavandula, 344, 353, 514
Leguminosæ, 346 and *n.*
Lentibulariaceæ, 424, 425 *n.*
Leontodon Autumnale, Plate XIX.
Liana, 358
*Lilium, 203,* 345, 357. *See* Lily (Index II.)
„ Fervidum, 534, 535
Linaria, 358, 479, 482
*Lucia,* 264, *285,* 313, 314, 344, *348,* 353, 354 *n.,* 423 and *n.,* 458, 535
„ Nivea, 423 *n.*
„ Regina, 351
„ Verna-Borealis, 348
Lychnis, 353, 354 *n.*
„ Flos-cuculi (Ragged Robin), 321 *n.*

*Magnolia, 238*
*Margarita, 313* and *n.,* 314, 344, 353, 355 *n. See also* Daisy (Index II.)
Melitta, 353, 514, 515, 525
„ Aurea, 521 *seq.*
Mentha, 353, 467, 479, 480, 514, and Plate XXVIII.
Mica, 353, 354 *n.,* 355 *n.*
Moiridæ, 358 and *n.,* 475
Monacha (Pedicularis), 473 *seq.,* 498
„ Grönlandica, 478
„ Lapponica, 478
„ Norvegica, 478

Monacha, Palustris, 477, 478
„ Ramosa, 478
„ Regina, 477, 478
„ Rosea, 477, 478, 481
„ Suecica, 479
*Myrtilla*, 238, *353*, *362*, 363, 366, 370, 545, and Plate XXIV.
Myrtus, *353*

Naiades, *357*, *358 n.*
*Narcissus*, *284*, 388, 529
Nasturtium, 482
Nerium, *358*
Nuciferæ, *359*

*Olea*, *353*
Oleander, *342*
*Ophryds*, *341*, *343*, *357*
Orchis, *226*, 410
Oreiades, *348*, *353*, *354* and *n.*, 364, 371
Orobanche, 482
Oxalis, 293, 294, 389, 528

*Papaver*, *269*, 273, *358*. *See also* Poppy (Index II.)
„ Rhoeas, 266 *seq.*, 273, 279, 284
*Papilionaceæ*, *314*. *See* Pea (Index II.)
*Papyrus*, *329*
Parnassia, 310 *n.*
Pedicularis, 473 *n.*, 476. *See* Monacha
Pedicularis Sylvatica, 477, 478
*Persica*, *313*, 348, 353, 360. *See also* Peach (Index II.)
Pervinca, *354*, 362 and *n.*
Phalangium, 199, 204
Phillyrea, 501
Pinguicula, 421 *seq.*
„ Alpina, 422, 426
„ Major, 421, 426
„ Minima, 427, and Fig. 26
„ Pallida, 421, 426
„ Violacea, 421, 426
Pleiades, *353*, *354* and *n.*
*Pomum*, *348*, *353*, *360*
*Primula*, *313*, *344*, *353*, 410, 539
Primulaceæ, 480 and *n.*

Ranunculus (water), 241
„ heterophyllus, 242
Rhinanthus, 482
"Rhodiates," *350*
Rhodiola rosea. *See* Houseleek (Index II.)
Rhododendron, *363*, 369, 370
*Rosa*, *313*, *348*, *353*, 360. *See also* Rose (Index II.)
„ "Regina," *351*
*Rubra*, *348*, *351*, *352*, *353*, *360*

Salvia, *344*, *353*, 514, *524*, and Fig. 39
„ Alba, 514
„ Fimbriata, 521
„ Patens, *523 n.*
„ Silvarum, 515 *seq.*, and Figs. 34–36
„ Splendens, *523 n.*
„ Vittata, 521, and Fig. 37
*Satyrium*, *343*, *345*, 467
Scintilla, *353*, *354 n.*, *355 n.*
Scorodonia, 436 and *n.*
Scrophulariaceæ, 389
*Sedum*, *315*. *See* Stella: Houseleek, Roof-foil (Index II.)
Silene Juncea, Plate XVIII.
Silvia, *353*, *354*, 468. *See also* Wood-Sorrel (Index II.)
Solanum, *345*, *358*
Soldanella, 410
Sponsa Solis, 292
*Stella*, *313*, *315*, *353*, *355 n.*

Teucrium, 471
Thibaudia, 369, 370.
Thymus, 479, 514. *See* Thyme (Index II.)
Tillandsia, 209
Tritonides, *357*, *358 n.*

Uranides, *353*, *354* and *n.*, 414
Utricularias, 430

*Veronica*, *257*, *353*, *355 n.*, *387 n.*, 414, 434 *seq.*, 468, 475, 482, *524*, *527*
„ Agrestis, 439, 442, 447 *n.*, 474
„ Alpina, 445
„ Arvensis, 442
„ Chamædrys, 441, 473 and *n.*
„ Clara, 438, 447
„ Decussata, 448
„ Fontium, 447
„ Gentianoides, 446, 474
„ Glauca, 447
„ Hederifolia, 441
„ Humifusa, 474, 475
„ Minuta, 444
„ Montana, 443
„ Officinalis, 443, 473, 474, 498, and Plate XXIX.
„ Ophrydea, 446
„ Peregrina, 444
„ Persica, 443
„ *Polita*, *257*, 447 *n.*, 474
„ Regina, 440, and Fig. 27
„ Scutellata, 445
„ Spicata, 445
„ Stagnarum, 446
„ Thymifolia, 444, 474
*Veronica*, Triphylla, 443, 446
„ Verna, 444, and Fig. 28
Vestales, *353*, *355* and *n.*, *423 n.*, 459, 465, 466 and *n.*, 467, 479, *513*, 514, *515*
*Viola*, *313*, *344*, *353*, *355 n.*, *387 seq.*, 410, 416, 468
„ Alpium, 400, 401, 409
„ Arum, *358*
„ Arvensis, 399, 400, 401, 412
„ Aurea, 399, 400, 401, 409
„ Biflora. *See* Aurea
„ Canina, 399, 400, 401, 413, and Plates XXV., XXVI.
„ Cornuta, 398, 399, 401, 413
„ Elatior. *See* Cornuta
„ Epipsila. *See* Palustris
„ Hirta. *See* Seclusa
„ Mirabilis, 399, 400, 401, 411
„ Montana, 399, 400, 401, 411
„ Odorata. *See* Regina
„ Palustris, 399, 400, 401, 412
„ Psyche, 399, 400, 401, 407, 412, *532*
„ Regina, 399, 400, 401, 405
„ Rupestris, 401, 403 and *n.*
„ Seclusa, 399, 400, 401, 413
„ Tricolor. *See* Psyche
Vitis, *357*

END OF VOLUME XXV

Printed by Ballantyne, Hanson & Co.
Edinburgh & London

GENERAL LIBRARY - U.C. BERKELEY

B000706840

334134

Ruskin

UNIVERSITY OF CALIFORNIA LIBRARY